ORDINARY COUNCIL MEETING

AGENDA

20 NOVEMBER 2024

Notice is hereby given, in accordance with the provisions of the Local Government Act 1993 that an **ORDINARY MEETING of ORANGE CITY COUNCIL** will be held in the **COUNCIL CHAMBER, CIVIC CENTRE, BYNG STREET, ORANGE on Wednesday, 20 November 2024** commencing at **6:30 PM.**

David Waddell

CHIEF EXECUTIVE OFFICER

For apologies please contact Executive Support on 6393 8391.

AGENDA

EVACUATION PROCEDURE

In the event of an emergency, the building may be evacuated. You will be required to vacate the building by the rear entrance and gather at the breezeway between the Library and Art Gallery buildings. This is Council's designated emergency muster point.

Under no circumstances is anyone permitted to re-enter the building until the all clear has been given and the area deemed safe by authorised personnel.

In the event of an evacuation, a member of Council staff will assist any member of the public with a disability to vacate the building.

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1 INTRODUCTION

1.1 APOLOGIES AND LEAVE OF ABSENCE

1.2 LIVESTREAMING AND RECORDING

This Council Meeting is being livestreamed and recorded. By speaking at the Council Meeting you agree to being livestreamed and recorded. Please ensure that if and when you speak at this Council Meeting that you ensure you are respectful to others and use appropriate language at all times. Orange City Council accepts no liability for any defamatory or offensive remarks or gestures made during the course of this Council Meeting. A recording will be made for administrative purposes and will be available to Councillors.

1.3 ACKNOWLEDGEMENT OF COUNTRY

I would like to acknowledge the Traditional Custodians of the land on which we meet today, the people of the Wiradjuri Nation. I pay my respects to Elders past and present, and extend those respects to Aboriginal Peoples of Orange and surrounds, and Aboriginal people here with us today.

1.4 DECLARATION OF PECUNIARY INTERESTS, SIGNIFICANT NON-PECUNIARY INTERESTS AND LESS THAN SIGNIFICANT NON-PECUNIARY INTERESTS

The provisions of Chapter 14 of the Local Government Act, 1993 (the Act) regulate the way in which Councillors and designated staff of Council conduct themselves to ensure that there is no conflict between their private interests and their public role.

The Act prescribes that where a member of Council (or a Committee of Council) has a direct or indirect financial (pecuniary) interest in a matter to be considered at a meeting of the Council (or Committee), that interest must be disclosed as soon as practicable after the start of the meeting and the reasons given for declaring such interest.

As members are aware, the provisions of the Local Government Act restrict any member who has declared a pecuniary interest in any matter from participating in the discussion or voting on that matter, and requires that member to vacate the Chamber.

Council's Code of Conduct provides that if members have a non-pecuniary conflict of interest, the nature of the conflict must be disclosed. The Code of Conduct also provides for a number of ways in which a member may manage non pecuniary conflicts of interest.

RECOMMENDATION

It is recommended that Councillors now disclose any conflicts of interest in matters under consideration by the Council at this meeting.

COUNCIL MEETING ADJOURNS FOR THE CONDUCT OF THE OPEN FORUM

COUNCIL MEETING RESUMES

2 MAYORAL MINUTES

Nil

3 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

RECOMMENDATION

That the Minutes of the Ordinary Meeting of Orange City Council held on 5 November 2024 (copies of which were circulated to all members) be and are hereby confirmed as a true and accurate records of the proceedings of the Council meeting held on 5 November 2024.

ATTACHMENTS

1 Minutes of the Ordinary Meeting of Orange City Council held on 5 November 2024

ORANGE CITY COUNCIL

MINUTES OF THE

ORDINARY COUNCIL MEETING

HELD IN COUNCIL CHAMBER, CIVIC CENTRE, BYNG STREET, ORANGE

ON 5 NOVEMBER 2024

COMMENCING AT 6:30 PM

1 INTRODUCTION

ATTENDANCE

Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton.

Chief Executive Officer, Director Corporate and Commercial Services, Director Development Services, Director Community, Recreation and Cultural Services, Director Technical Services, Manager Corporate Governance, Executive Support Manager, Executive Support Officer

The Mayor introduced New and Returning Councillors.

1.1 APOLOGIES

Nil.

1.2 LIVESTREAMING AND RECORDING

The Mayor advised that the meeting was being livestreamed and recorded.

1.3 ACKNOWLEDGEMENT OF COUNTRY

The Mayor conducted an Acknowledgement of Country.

1.4 OPENING PRAYER

Minister Tim Goldsmith of the Orange Evangelical Church led the Council in Prayer.

The Chief Executive Officer read information about the Oath and Affirmation of Office of Council.

1.5 OATH OR AFFIRMATION OF OFFICE BY COUNCILLORS

TRIM REFERENCE: 2024/1007

The Chief executive Officer administered the oath of Office and the record is as follows:
The following Councillors took an Oath of Office:
Cr Duffy
Cr Greenhalgh
Cr McDonell
Cr Peterson
Cr Power
Cr Whitton
The following Councillors took an Affirmation of Office:
Cr Judge
Cr Kinghorne
Cr Mallard
Cr Mileto
Cr Ruddy
Cr Stedman

The Chief Executive Officer introduced Directors and Line Managers to the Council.

1.6 DECLARATION OF PECUNIARY INTERESTS, SIGNIFICANT NON-PECUNIARY INTERESTS AND LESS THAN SIGNIFICANT NON-PECUNIARY INTERESTS

Cr Peterson declared a non-significant, non-pecuniary interest in Item 5.6 – Audit, Risk and Improvement Committee (ARIC) – Membership and Terms of Reference as he sits on the Board of Live Better with the ARIC Chairperson.

There was no Open Forum.

2 MAYORAL MINUTES

Nil

3 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

RESOLVED - 24/415 **Cr J Whitton/Cr T Greenhalgh**

That the Minutes of the Ordinary Meeting of Orange City Council held on 3 September 2024 (copies of which were circulated to all members) be and are hereby confirmed as a true and accurate record of the proceedings of the Council meeting held on 3 September 2024.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

4 NOTICES OF MOTION/NOTICES OF RESCISSION

Nil

5 GENERAL REPORTS

Item - 5.1 - Oath or Affirmation of Office by Councillors - has been moved to another part of the document – Item 1.5.

5.2 ELECTION OF DEPUTY MAYOR 2024

TRIM REFERENCE: 2024/1008

MOTION **Cr K Duffy/Cr J Whitton**

That Council resolves:

1 To elect a Deputy Mayor for the period November 2024 to September 2025, then re-elect in September 2025 and subsequent years for a one year term.

2 That the method of voting for the election of Deputy Mayor be ordinary ballot.

3 That the Chief Executive Officer, acting as the Returning Officer, conduct the election for the Deputy Mayor.

AMENDMENT **Cr D Mallard/Cr M McDonell**

That Council resolves:

1 To elect a Deputy Mayor for the period November 2024 to September 2026 (then re-elect in September 2026 for the remainder of the Council term).

2 That the method of voting for the election of Deputy Mayor be ordinary ballot.

3 That the Chief Executive Officer, acting as the Returning Officer, conduct the election for the Deputy Mayor.

For: Cr T Mileto (Mayor), Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr G Power, Cr M Ruddy, Cr J Stedman
Against: Cr K Duffy, Cr T Greenhalgh, Cr G Judge , Cr S Peterson, Cr J Whitton
Absent: Nil

THE AMENDMENT ON BEING PUT WAS CARRIED AND BECAME THE MOTION.

THE MOTION ON BEING PUT WAS CARRIED.

RESOLVED - 24/416 **Cr D Mallard/Cr M McDonell**

That Council resolves:

1 To elect a Deputy Mayor for the period November 2024 to September 2026 (then re-elect in September 2026 for the remainder of the Council term).

2 That the method of voting for the election of Deputy Mayor be ordinary ballot.

3 That the Chief Executive Officer, acting as the Returning Officer, conduct the election for the Deputy Mayor.

For: Cr T Mileto (Mayor), Cr T Greenhalgh, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr J Stedman, Cr M Ruddy,
Against: Cr K Duffy, Cr J Whitton, Cr G Judge
Absent: Nil

The Chief Executive Officer advised valid nominations had been received from:

- Cr Tammy Greenhalgh
- Cr Kevin Duffy
- Cr Steven Peterson

Each nominee addressed the meeting regarding their nomination.

The Chief Executive Officer conducted the election.

Round 1 Votes

Cr Tammy Greenhalgh	6
Cr Kevin Duffy	3
Cr Steven Peterson	3

Cr Kevin Duffy & Cr Steven Peterson were tied on the lowest number of votes.

Following the result of the first ballot Cr Kevin Duffy withdrew his nomination followed by Cr Steven Peterson withdrawing his nomination.

Cr Greenhalgh was declared by the CEO to be elected to the position of Deputy Mayor.

5.3 COUNCILLOR VACANCY - COUNTBACK METHOD

TRIM REFERENCE: 2024/1009

RESOLVED - 24/417 **Cr J Whitton/Cr M McDonell**

That pursuant to section 291A(1)(b) of the Local Government Act 1993, Orange City Council declares that casual vacancies occurring in the office of a Councillor within 18 months after the last ordinary election of Councillors for the Council on 14 September 2024 are to be filled by a countback of votes cast at that election for the office in accordance with section 291A of the Act and directs the Chief Executive Officer to notify the NSW Electoral Commission of the Council's decision within 7 days of the decision.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

Cr Kinghorne asked what happens with a vacancy after the 18 month time period outlined in the legislation.

The Chief Executive Officer advised that an election would probably be held. The Minister has the power under s294 of the Act to dispense with a by-election within 18 months of the next Ordinary election.

5.4 DAY, TIME AND FREQUENCY OF COUNCIL MEETINGS

TRIM REFERENCE: 2024/1010

RESOLVED - 24/418 **Cr J Whitton/Cr M McDonell**

That Item 5.4 – Day, Time and Frequency of Council Meetings be heard and voted on *in seriatim.*

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

RESOLVED - 24/419 **Cr S Peterson/Cr M McDonell**

1 That Council hold two Ordinary Meetings of Council per month, one of which will include Policy Committees.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

RESOLVED - 24/420 **Cr J Whitton/Cr T Greenhalgh**

2 That the meetings be held on the First and Third Tuesday of the month starting at 6.30pm.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

RESOLVED - 24/421 **Cr D Mallard/Cr M McDonell**

3 That the Meeting planned for 19 November 2024 be changed to 20 November to allow for attendance at the LGNSW Annual Conference.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

4 **THIS ITEM WAS WITHDRAWN.**

RESOLVED - 24/422 **Cr J Whitton/Cr S Peterson**

5 That no Meetings be planned for January each year.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

RESOLVED - 24/423 **Cr J Whitton/Cr D Mallard**

6 That an Open Forum be held at each meeting.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

RESOLVED - 24/424 **Cr J Whitton/Cr T Greenhalgh**

7 That an updated Code of Meeting Practice be provided to Council before placement on Public Exhibition for 28 days.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

5.5 MATTER APPROVED UNDER DELEGATION - NEW YEARS EVE 2024

TRIM REFERENCE: 2024/1650

RESOLVED - 24/425 **Cr M McDonell/Cr G Power**

That the information contained in the Report on Matters Approved under Delegation be acknowledged.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

5.6 AUDIT, RISK AND IMPROVEMENT COMMITTEE (ARIC) - MEMBERSHIP AND TERMS OF REFERENCE

TRIM REFERENCE: 2024/1089

RESOLVED - 24/426 **Cr K Duffy/Cr S Peterson**

That Council resolves:

1 To appoint Cr Kinghorne and Cr Peterson as Non-Voting Councillors to the Audit, Risk and Improvement Committee until September 2028 unless otherwise resolved by Council.
2 To appoint Mr Robert Lagaida as an Independent Member and Chairperson of the Audit, Risk and Improvement Committee until September 2028 unless otherwise resolved by Council.
3 To appoint Mr Lewis von Stieglitz as an independent member of the Audit, Risk and Improvement Committee until September 2028 unless otherwise resolved by Council.
4 To appoint Mr Bill Gillooly as an independent member of the Audit, Risk and Improvement Committee until November 2025 unless otherwise resolved by Council.
5 To place Strategic Policy ST40 – Audit Risk & Improvement - Terms of Reference on public exhibition for a minimum of 28 days.
6 To place Strategic Policy ST41 – Internal Audit – Terms of Reference on public exhibition for a minimum of 28 days.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

5.7 MINING AND ENERGY RELATED COUNCILS (MERC) - COUNCILLOR REPRESENTATIVE

TRIM REFERENCE: 2024/1660

RESOLVED - 24/427 **Cr J Whitton/Cr S Peterson**

That Council select Cr Duffy (and the Mayor as an alternate) as the representative for the Mining and Energy Related Councils Committee.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

6 CLOSED MEETING

In accordance with the Local Government Act 1993, and the Local Government (General) Regulation 2021, in the opinion of the Chief Executive Officer, the following business is of a kind as referred to in Section 10A(2) of the Act, and should be dealt with in a Confidential Session of the Council meeting closed to the press and public.

In response to a question from the Mayor, the Chief Executive Officer advised that no written submissions had been received relating to any item listed for consideration by the Closed Meeting of Council.

The Mayor extended an invitation to any member of the public present at the meeting to make a presentation to the Council as to whether the meeting should be closed for a particular item.

MOTION **Cr K Duffy/Cr F Kinghorne**

That Item 6.1 – that "Council Move Into a Closed Meeting" instead be moved to be heard in open Council.

For: Cr K Duffy, Cr G Judge
Against: Cr T Mileto (Mayor), Cr T Greenhalgh, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr J Whitton, Cr J Stedman, Cr M Ruddy
Absent: Nil

THE MOTION ON BEING PUT TO THE MEETING LOST.

RESOLVED - 24/428 **Cr D Mallard/Cr J Whitton**

That Council adjourn into a Closed Meeting and members of the press and public be excluded from the Closed Meeting, and access to the correspondence and reports relating to the items considered during the course of the Closed Meeting be withheld unless declassified by separate resolution. This action is taken in accordance with Section 10A(2) of the Local Government Act, 1993 as the items listed come within the following provisions:

6.1 2024 LGNSW Annual Conference - Nomination for Councillor Attendance

This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (f) matters affecting the security of the Council, Councillors, Council staff or Council property.

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

The Mayor declared the Ordinary Meeting of Council adjourned for the conduct of the Closed Meeting at 7.35pm.

The Mayor declared the Ordinary Meeting of Council resumed at 7.40pm.

7 RESOLUTIONS FROM CLOSED MEETING

The Chief Executive Officer read out the following resolutions made in the Closed Meeting of Council.

6.1 2024 LGNSW ANNUAL CONFERENCE - NOMINATION FOR COUNCILLOR ATTENDANCE

TRIM REFERENCE: 2024/1309

RESOLVED - 24/429 **Cr M McDonell/Cr T Greenhalgh**

That Council resolves:

1 To select five Councillors to attend the LGNSW Annual Conference from 17-19 November 2024.

2 That from those Councillors attending, Council selects 3 Councillors to be voting delegates).

For: Cr T Mileto (Mayor), Cr K Duffy, Cr T Greenhalgh, Cr G Judge, Cr F Kinghorne, Cr D Mallard, Cr M McDonell, Cr S Peterson, Cr G Power, Cr M Ruddy, Cr J Stedman, Cr J Whitton
Against: Nil
Absent: Nil

THE MEETING CLOSED AT 7.42PM.

This is Page Number 9 and the Final Page of the Minutes of the Ordinary Meeting of Orange City Council held on 5 November 2024.

4 NOTICES OF MOTION/NOTICES OF RESCISSION

Nil

5 GENERAL REPORTS

5.1 STATE OF THE CITY

RECORD NUMBER: 2024/1662
AUTHOR: David Waddell, Chief Executive Officer

EXECUTIVE SUMMARY

The State of the City report is a requirement of the Integrated Planning & Reporting Framework as part of reviewing the progress of implementing the Community Strategic Plan (CSP) over the previous term of Council.

In 2023, Orange City Council joined with Cowra Shire, Oberon and Weddin Shire Councils as part of a Central NSW Joint Organisation (JO) procurement to undertake a Community Engagement Survey as mandated by the Office of Local Government's Integrated Planning and Reporting (IP&R) Framework.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "15.1. Deliver communication that is open, accessible, meaningful and regular across a range of media".

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

Nil.

RECOMMENDATION

That the information provided in the report by the Chief Executive Officer on the State of the City be acknowledged.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

State of the City

The State of the City Report focuses on how effective council has been in delivering social, environmental, economic and civic leadership objectives over the term of the previous council.

It is not an extensive list of all activities for the period, but it does illustrate that Local government is central to the way a city advances and develops and how challenges are met. It is an opportunity to look back at what has been achieved during the last Term of Council and how it has happened against the backdrop of our Integrated Planning and Reporting framework.

The State of the City Report covers the objectives of the Community Strategic Plan, and the achievement of Delivery/Operational Plans across the Term of Council and provides a glance of the achievements made from 2021 to 2024.

At the time of publication of this State of the City report, the 2023/2024 Annual Report has been completed and will be tabled with the Minister for Local Government at the end of November 2024.

A copy of the State of the City is attached to this report and will be provided to Councillors at the meeting.

Community Engagement Survey

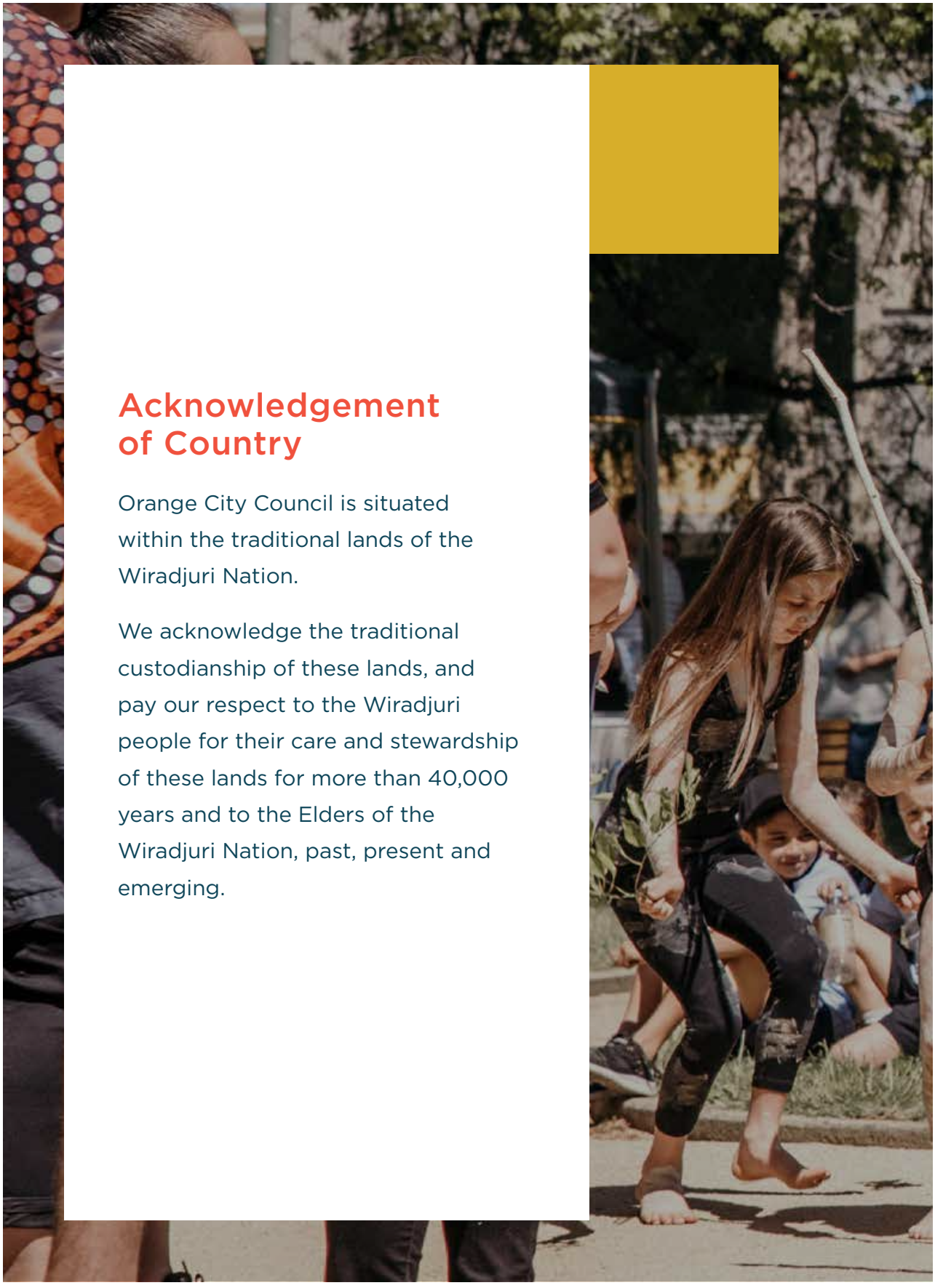
In 2023, Orange City Council joined with Cowra Shire, Oberon and Weddin Shire Councils as part of a Central NSW Joint Organisation (JO) procurement to undertake a Community Engagement Survey as mandated by the Office of Local Government's Integrated Planning and Reporting (IP&R) Framework.

A copy of the results is attached.

ATTACHMENTS

1 State Of The City Report 2021-2024, D24/124707⇩
2 Community Engagement Survey Results 2023, D24/113391⇩


ORANGE
CITY COUNCIL
State of the City Report
2021/24
2021_
2024



Acknowledgement of Country

Orange City Council is situated within the traditional lands of the Wiradjuri Nation.

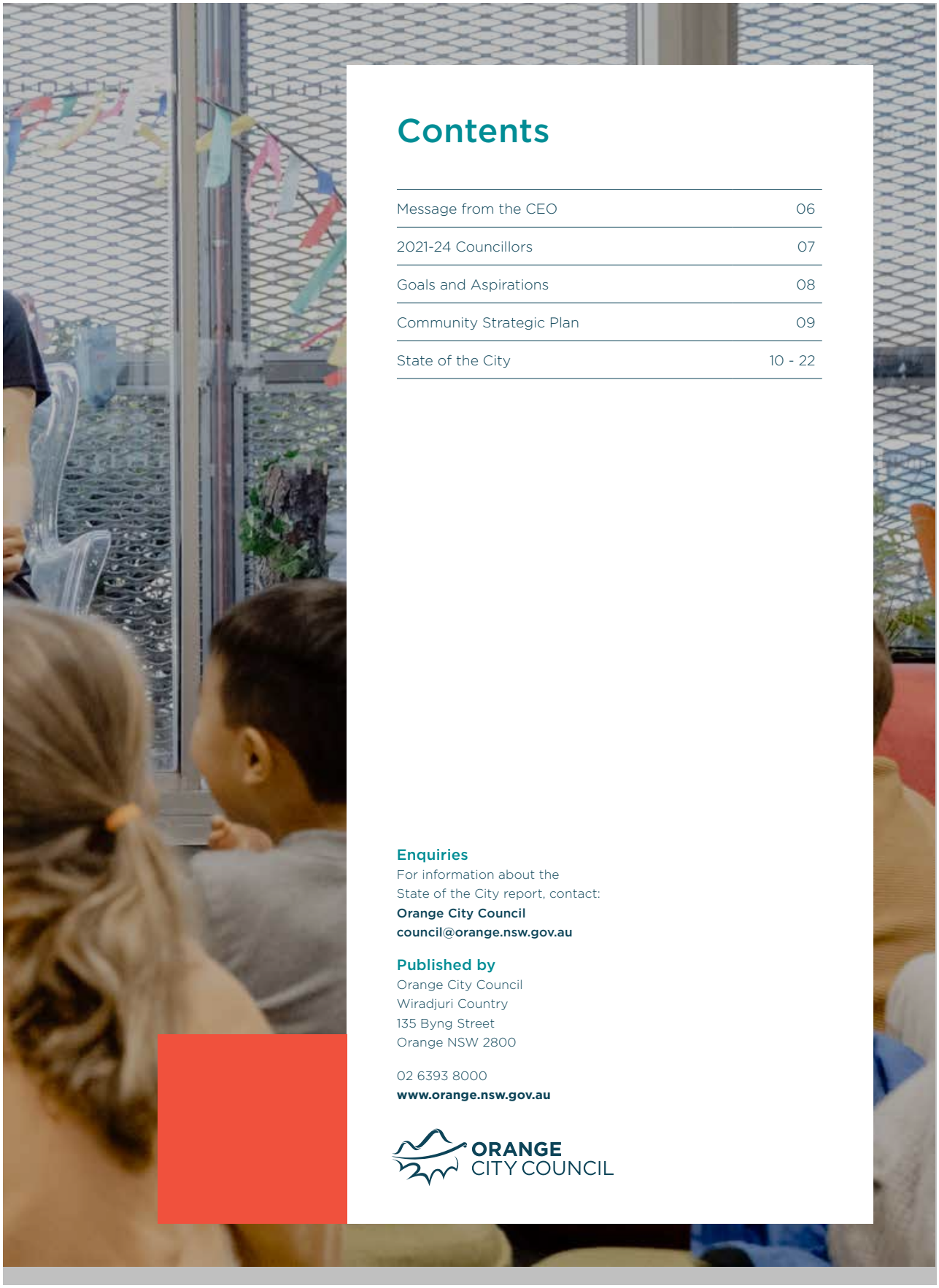
We acknowledge the traditional custodianship of these lands, and pay our respect to the Wiradjuri people for their care and stewardship of these lands for more than 40,000 years and to the Elders of the Wiradjuri Nation, past, present and emerging.



2021_
2024



2021_
2024



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Enquiries
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State of the City report, contact:
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ORANGE
CITY COUNCIL

STATE OF THE CITY REPORT

Message from the CEO



This 2021-2024 term has been a journey with its share of progress, setbacks and challenges. As the term began, the Orange community was continuing to recover from the impact of the COVID-19 pandemic. After the December 2021 election, we welcomed a new and diverse Council with eight new members. Notably there were three women among the new faces.

The line-up included a new Mayor in Jason Hamling, the second popularly elected Mayor of Orange and 53rd Mayor as well as our first Indigenous Councillor Gerald Power who was subsequently elected Deputy Mayor. Despite the high proportion of new faces, progress did not slow. The new Council, with its blend of enthusiasm and experience injected new views and vision across a number of fronts.

The start of the new term began with a wide ranging community conversation to prepare a vision for the next ten years as part of the Community Strategic Plan (CSP). We heard from the community who said strongly they loved the region as it is today and want it protected, but they were also ambitious and wanted to see a progressive and growing city.

Key goals in the new CSP were for Council to give greater priority to:

- tackling affordable housing
- providing more recreational options for young people
- addressing problems surrounding social equity and
- a greater focus on Mount Canobolas (Gaanha-bula) and Lake Canobolas.

Now at the other end of this term, I'm pleased this State of the City report can show progress in most areas.

This progress shows a constructive balance between:

- the focus on developing the infrastructure needed to support a growing city into the future
- a priority to support the cultural life that enriches and challenges our community, and
- the business-as-usual work that every Council must complete every day.

Some of the achievements I am particularly proud of are:

- $60 million Sports precinct well underway
- Playgrounds—Adventure Playground rebuild, Matthews Park, shade sails on playgrounds,
- Indoor Winter playground established
- Affordable housing—Landcom suburb agreements signed
- FutureCity street upgrade and Public Arts programs
- Conservatorium of Music construction begun
- Our wonderful aged, migrant and youth programs
- 16 Days of Activism against Gender-Based Violence
- Southern Feeder Road—Stage 4 being built
- Clergate Road upgrade
- Huntley Road and Beasley Road upgrades
- Northern Distributor Road handover to NSW Government
- Local housing strategy—20 years supply provided
- Solar and battery installs
- Wade Park net zero precinct.

This long list of work could only happen with the efforts and dedication of our wonderful staff. I commend them at every level.

David Waddell, Chief Executive Officer

2021-2024

Councillors

This report outlines key achievements of Orange City Council during the 2021-2024 Council term.

Delayed 12 months by the COVID pandemic, Orange residents went to the polls to elect their Council on 4 December 2021.

The result of the poll was officially declared on 21 December 2021. After 17 years on Council Cr Jason Hamling was elected mayor. Orange's first Indigenous council member, Cr Gerald Power, was elected Deputy Mayor. The 12-member new Council included eight elected for the first time, (Crs Gerald Power, Jack Evans, Glenn Floyd, Tammy Greenhalgh, Frances Kinghorne, Melanie McDonell, David Mallard, and Steven Peterson) and four who were re-elected (Crs Jason Hamling, Kevin Duffy, Tony Mileto and Jeff Whitton).



Cr Jason Hamling
Mayor



Cr Gerald Power
Deputy Mayor



Cr Kevin Duffy



Cr Jack Evans



Cr Glenn Floyd



Cr Tammy Greenhalgh



Cr Frances Kinghorne



Cr David Mallard



Cr Melanie McDonell



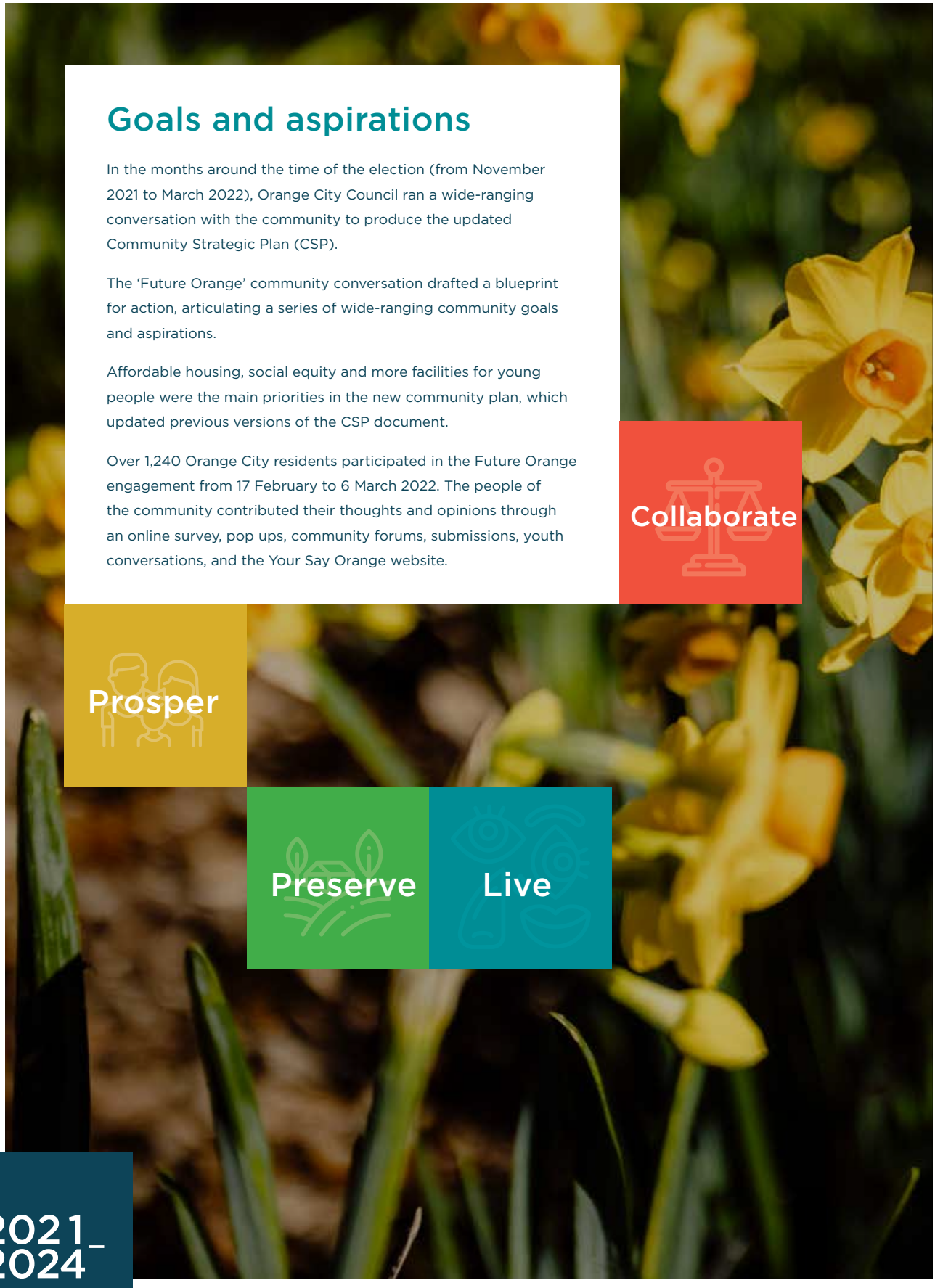
Cr Tony Mileto



Cr Steven Peterson



Cr Jeff Whitton



Goals and aspirations

In the months around the time of the election (from November 2021 to March 2022), Orange City Council ran a wide-ranging conversation with the community to produce the updated Community Strategic Plan (CSP).

The 'Future Orange' community conversation drafted a blueprint for action, articulating a series of wide-ranging community goals and aspirations.

Affordable housing, social equity and more facilities for young people were the main priorities in the new community plan, which updated previous versions of the CSP document.

Over 1,240 Orange City residents participated in the Future Orange engagement from 17 February to 6 March 2022. The people of the community contributed their thoughts and opinions through an online survey, pop ups, community forums, submissions, youth conversations, and the Your Say Orange website.

Collaborate

Prosper

Preserve

Live



Community Strategic Plan

On 19 April 2022, the draft CSP was put back to the community by the elected Council for comment.

The community response to exhibition of the draft Community Strategic Plan, Delivery and Operational plans and other associated documents through the YourSay Orange site is as follows:

- 295 people visited the Budget/CSP site
- 88 People downloaded budget and/or CSP documents
- 45 people completed an online survey and 7 people contributed comments

The survey questions on the CSP asked for a response to several key new directions included in the draft CSP:

- There was 16.7% support for Council tackling shortage of affordable and social housing and seeking more diversity in housing.
- There was 6.2% support for Council seeking to provide more recreation options for young people in Orange.
- There was 13.2% support for Council taking action to address problems of poverty and social inequity in Orange.

The new CSP was adopted by Council on 27 June 2022.

To compile the CSP, a table of high-level goals was arranged under four themes:

- Live
- Preserve
- Prosper, and
- Collaborate

These themes encapsulate the aspirations of the community together with the business-as-usual requirements of a local Council as determined state government regulations and previous decisions of Council.

Under each theme, the Operational Plan of the new CSP outlined hundreds of actions to guide day-by-day activities during the next three years of the Council life.

(Other documents in the IP&R suite place each year's activities and budget in the context of longer-term financial management plans, alongside plans to manage property assets and the number of staff needed to deliver these actions.)

According to the new CSP, the Orange community wanted Orange City Council to give greater priority to tackling affordable housing, providing more recreational options for young people and addressing problems surrounding social equity and a greater focus on Mount Canobolas (Gaahna bulla) and Lake Canobolas.

Among others, the community conversation also produced specific calls for:

- Better all-year-round access to the Aquatic Centre's 50-metre pool
- Better roads, footpaths and cycleways
- More electric vehicle charging stations
- More local action to address the impact of climate change and
- Better communication from Council

Following his election, newly elected Mayor Jason Hamling said while the Council would retain a focus on its core business areas such as roads, waste and water, he identified support for families and young people, new opportunities for the health precinct in south Orange, the sports precinct and the mountain bike track on Mount Canobolas as key projects for the coming term.

This report charts results on achieving these goals during the 2021-2024 term.

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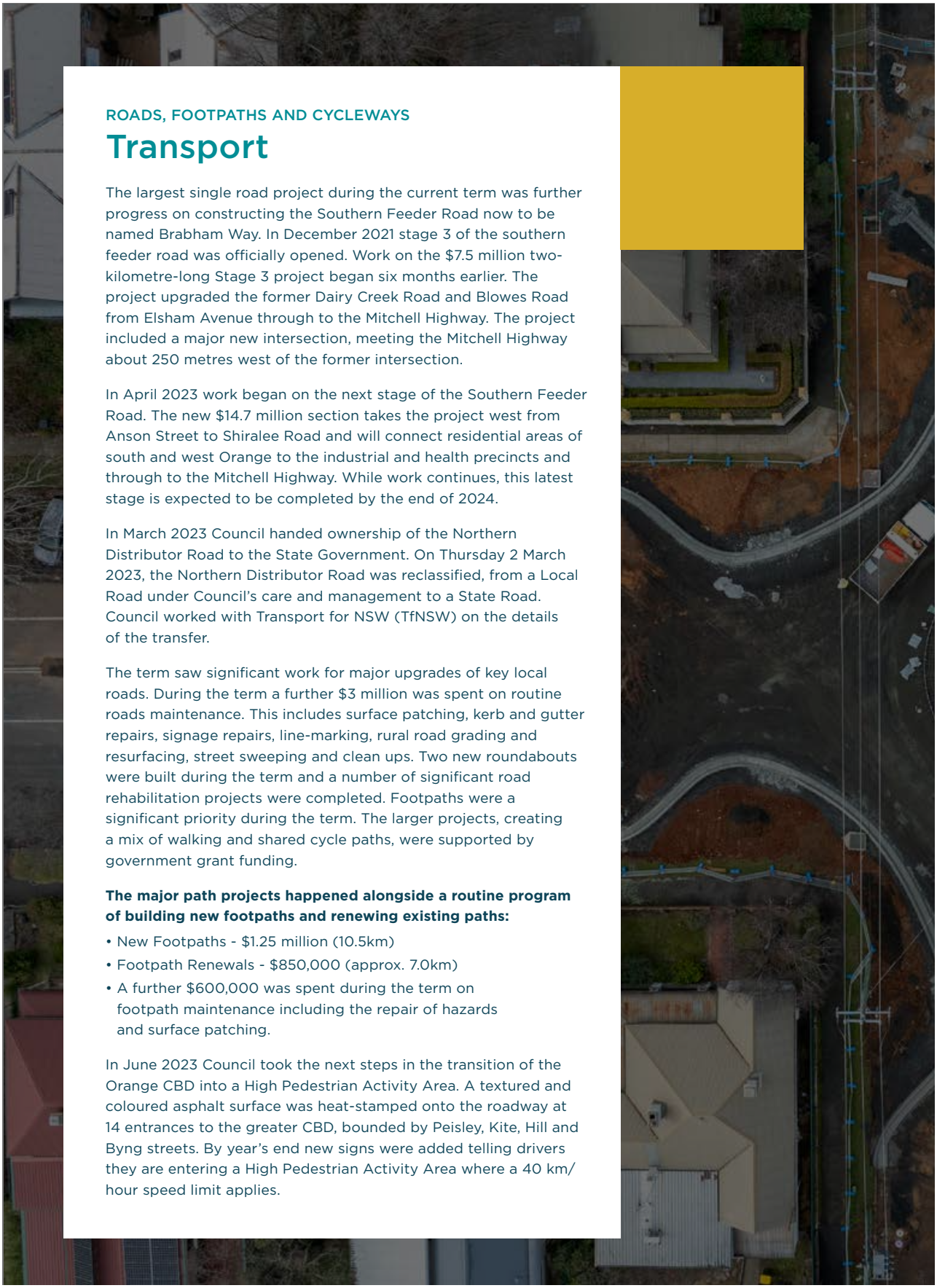

ROADS, FOOTPATHS AND CYCLEWAYS

Transport

The largest single road project during the current term was further progress on constructing the Southern Feeder Road now to be named Brabham Way. In December 2021 stage 3 of the southern feeder road was officially opened. Work on the $7.5 million two-kilometre-long Stage 3 project began six months earlier. The project upgraded the former Dairy Creek Road and Blowes Road from Elsham Avenue through to the Mitchell Highway. The project included a major new intersection, meeting the Mitchell Highway about 250 metres west of the former intersection.

In April 2023 work began on the next stage of the Southern Feeder Road. The new $14.7 million section takes the project west from Anson Street to Shiralee Road and will connect residential areas of south and west Orange to the industrial and health precincts and through to the Mitchell Highway. While work continues, this latest stage is expected to be completed by the end of 2024.

In March 2023 Council handed ownership of the Northern Distributor Road to the State Government. On Thursday 2 March 2023, the Northern Distributor Road was reclassified, from a Local Road under Council's care and management to a State Road. Council worked with Transport for NSW (TfNSW) on the details of the transfer.

The term saw significant work for major upgrades of key local roads. During the term a further $3 million was spent on routine roads maintenance. This includes surface patching, kerb and gutter repairs, signage repairs, line-marking, rural road grading and resurfacing, street sweeping and clean ups. Two new roundabouts were built during the term and a number of significant road rehabilitation projects were completed. Footpaths were a significant priority during the term. The larger projects, creating a mix of walking and shared cycle paths, were supported by government grant funding.

The major path projects happened alongside a routine program of building new footpaths and renewing existing paths:

- New Footpaths - $1.25 million (10.5km)
- Footpath Renewals - $850,000 (approx. 7.0km)
- A further $600,000 was spent during the term on footpath maintenance including the repair of hazards and surface patching.

In June 2023 Council took the next steps in the transition of the Orange CBD into a High Pedestrian Activity Area. A textured and coloured asphalt surface was heat-stamped onto the roadway at 14 entrances to the greater CBD, bounded by Peisley, Kite, Hill and Byng streets. By year's end new signs were added telling drivers they are entering a High Pedestrian Activity Area where a 40 km/hour speed limit applies.



LOCAL ROADS UPGRADES	PROJECT VALUE	LENGTH OF PROJECT
Beasley Road	$2,000,000	3.0 km
Clergate Road	$8,000,000	1.6 km
Huntley Road	$1,000,000	5.0 km
Forest Road	$2,400,000	2.6 km
McLachlan Street	$1,200,000	0.6 km

NEW ROUNDABOUTS	PROJECT VALUE
Dalton & Clinton Roundabout	$500,000
Moulder & Hill Roundabout	$900,000

ROAD REHABILITATION	PROJECT VALUE	LENGTH OF PROJECT
William & Dalton Roundabout	$250,000	0.2 km
Dalton Street (William to Peisley)	$170,000	0.5 km
Aerodrome Road	$260,000	0.5 km
Diamond Drive	$350,000	1.5 km
Icely Road (Repair and Resurface)	$300,000	5.0 km
Dalton & Peisley Roundabout	$230,000	0.2 km
McLachlan Street (Dalton to Margaret)	$1,200,000	0.6 km
Kite & Hill Roundabout	$275,000	0.2 km
Minor Rehabilitation Projects	$1,500,000	1.5 km
Road Resealing and Asphalting	$1,500,000	3.0 km

FOOTPATHS	PROJECT VALUE	LENGTH OF PROJECT
Adina Crescent	$170,000	1.0 km
Edward Street	$110,000	0.5 km
Northern Distributor Road	$250,000	0.4 km
Sundew Circuit	$150,000	0.2 km
Molong Road	$800,000	2.2 km

2021_
2024



Mount Canobolas mountain bike track

The proposal to build a 100 km network of mountain bike trails on Mt Canobolas reached a milestone in January 2022 with Orange City Council lodging the paperwork to seek State Government planning approval. After 12 months of investigation by a team of environmental consultants, archaeologists and track design experts, Council lodged the application with the Department of Industry Planning and Environment (DPIE) for the project to be considered as a State Significant Development (SSD).

While a long-standing Council motion to explore the building of a network of mountain bike tracks on Mt Canobolas remains a project, the next round of environmental assessments for that application to the Planning Dept would require further funding. While recognising significant community support for the proposal, due to current challenges, the Council did not allocate funding for the next steps of the track in the 2024/25 annual budget. The 2022 application has lapsed.

Lake Canobolas

The call in the CSP for more attention for Lake Canobolas was delivered by work on ten projects aimed at improving access to the water and recreation areas for all community members. The $1.3 million upgrade was jointly-funded by the NSW Government, Orange City Council and Cadia Valley Operations.

The range of projects included:

- Retaining walls with built-in paths designed to make the lake's two beaches more accessible
- Replacing the playground on the eastern side of the lake with more modern accessible play equipment
- An upgrade to the visitor walkway in the historic pump house
- Re-aligning internal roads between the lake and the café, including a new pedestrian crossing
- New line-making in parking areas
- A new location to launch canoes and dragon boats
- New shade structures
- A new, accessible amenities block alongside the new playground
- A new, accessible amenities block on the western side of the lake

A wheelchair accessible (2.5m wide) floating boardwalk on the western shore is due to be completed in 2024.



Conservatorium of Music

In October 2023 work to build a new home for the Orange Regional Conservatorium (ORC) and Planetarium took a major step forward after a Council meeting agreed to contribute up to $18.5 million to fund a shortfall in grants for the $33.5 million project ever.

The amount is the biggest contribution that Council has made to a single project.

The conservatorium was seen as a key community education facility with more than 1400 enrolments and students from 1-year olds to more than 80.

In January 2024, Prime Minister Anthony Albanese came to Orange for a ceremony to turn the first sod for the building. Work continues on site.

Sports Precinct

Plans to build a new Sports Precinct passed a numbers of milestones during the current term.

In February 2022, the Western Regional Planning Panel gave concept planning approval for the precinct in a parklands setting alongside Sir Jack Brabham Park.

In April 2022 the removal of trees began on the site of the former northern nine-hole golf course.

In July 2022 preliminary earthworks began, which saw the sloping precinct, from Forest Road to Huntley Road, transforming the site to deliver three levels as the sites for an athletics track, eight sporting fields and a marquee stadium.

In February 2024, following a collaborative design review between Orange City Council and the State Government, the Government committed $59.5 million to the Sports Complex.

The NSW Government said it was committed to working with Council to ensure the successful delivery of this vital community infrastructure and welcomed Orange City Council's commitment to provide any additional funding required if the project exceeds the State's commitment.

A review of all state government projects conducted by NSW Government resulted in a break in activity on the site.

In July 2024 the Precinct became a hive of activity again following the decision by Orange City Council to award the contract for turfing eight new sporting fields.

This stage includes the installation of underground electrical fittings for future sports field lighting.

The irrigation and drainage work, which also includes building two water tanks and the installation of pumps, will see trenches dug for underground pipes.

The new sporting fields will be built with:

- trenched-in sub-surface drains
- an automatic irrigation system
- 200mm sand-topped fields, and
- final grass turfing which will include the planting of Santa Anna sprigs

City's cultural life

ORANGE CIVIC THEATRE

After COVID disruptions with no live theatre followed by significant social distancing measures, the Orange Civic Theatre dared to dream of a time when we can once again enjoy theatre with family and friends, sitting side by side and celebrate the experience.

The annual launch of the Theatre's 2022 season 'Dare to Dream' celebrated the sheer joy of live theatre, with 27 productions promising to ignite the mind, comfort the body and feed the soul. Highlights of the 2022 season included regular favourites the Wharf Revue, Bell Shakespeare, Orange Theatre Company and the Sydney Comedy Festival Showcase, as well as Opera Australia, the Sydney Symphony Orchestra, the Orange Chamber Festival and the new Orange Winter Jazz Festival.

The 2023 and 2024 seasons also felt like a return to the full theatre experience. 2024 included the Melbourne and Syndey Touring Comedy Festivals, the Australian Haydn Ensemble, the Syndey Dance Company, Bell Shakespeare and as always some great shows for the Orange Theatre Company.

ORANGE REGIONAL MUSEUM

The quality of exhibitions curated by the Orange Regional Museum was highlighted by a new 2022 show which showcased ancient



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indigenous astronomy in new exhibition. Opening in August 2022, Mulaa Giilang: Wiradjuri stories of the night sky draws on tens of thousands of years of cultural tradition and knowledge, and explores how for First Nations people, the earth, sea and sky are intimately connected.

The exhibition was curated by Wiradjuri knowledge holder Ian (Doug) Sutherland, with contributions from cultural and language advisor, Wiradjuri Elder Uncle Neil Ingram, artwork and illustrations by Wiradjuri artist Kylie Tarleton, film production by Jack Steele and music by Ricky Ah-See. The exhibition has since won a number of industry awards for excellence.

Orange 412 was a popular exhibition in 2023 celebrating the achievements and history of the Orange Fire Brigade.

ORANGE CITY LIBRARY

The Orange City Library provided a range of services including the Orange Readers and Writers Festival. Last held before the pandemic in 2019, the festival returned in 2022 featuring workshops and talks with inspiring authors to coincide with the Winter Fire Festival.

In 2022 Central West Libraries also launched a new website to capture and share Central West history, heritage and stories. 'Recollect Central West' provided easy online access to a rich collection of heritage material relating to the NSW Central West, its people, places and events.

The site contains significant items from Central West Libraries' local history collections including images, publications, photographs and maps, as well as the Central Western Daily newspaper negative collection.

In February 2023 Family literacy programs returned to Orange City Library as the school year began. The library continued to offer a range of free activities for parents and carers to enjoy with their babies and toddlers.

ORANGE REGIONAL GALLERY

Orange Regional Gallery reopened in December 2021 after a successful Gallery Extension Project. The extension was designed by Sydney firm Architect Marshall and includes a new 270-square-metre contemporary gallery with ground-breaking lighting design, a 73-seat gallery theatre, a new state-of-the-art storage and conservation area and refurbishments to existing spaces, including a smaller exhibition space and the gallery's front-of-house reception area.

The past 3 years have included major highlights with around 17 – 20 separate exhibitions presented each year. Exhibition highlights have included major exhibitions of international artists William Kentridge and Laurence Edwards, developed in partnership with The Art Gallery of New South Wales and Messum's Wilshire respectively.

Alongside this the Gallery presented the work of local, regional and nationally significant artists at all stages of their career including Catherine O'Donnell, Aida Tomescu, Euan Macleod and John R Walker. The Here/Now community art exhibition is presented each year and is open to all artists across the central west.

A growing education and engagement program has included an increase in talks and screenings in our new theatrette. School visitation is strong and SPARKE exhibitions, created in partnership with the region's primary schools sees local children exhibiting their work in the Gallery.

The Gallery's nationally significant collection continues to grow and is a source of community pride. The Extension Project has allowed for the Collection to be now shown regularly all year round.





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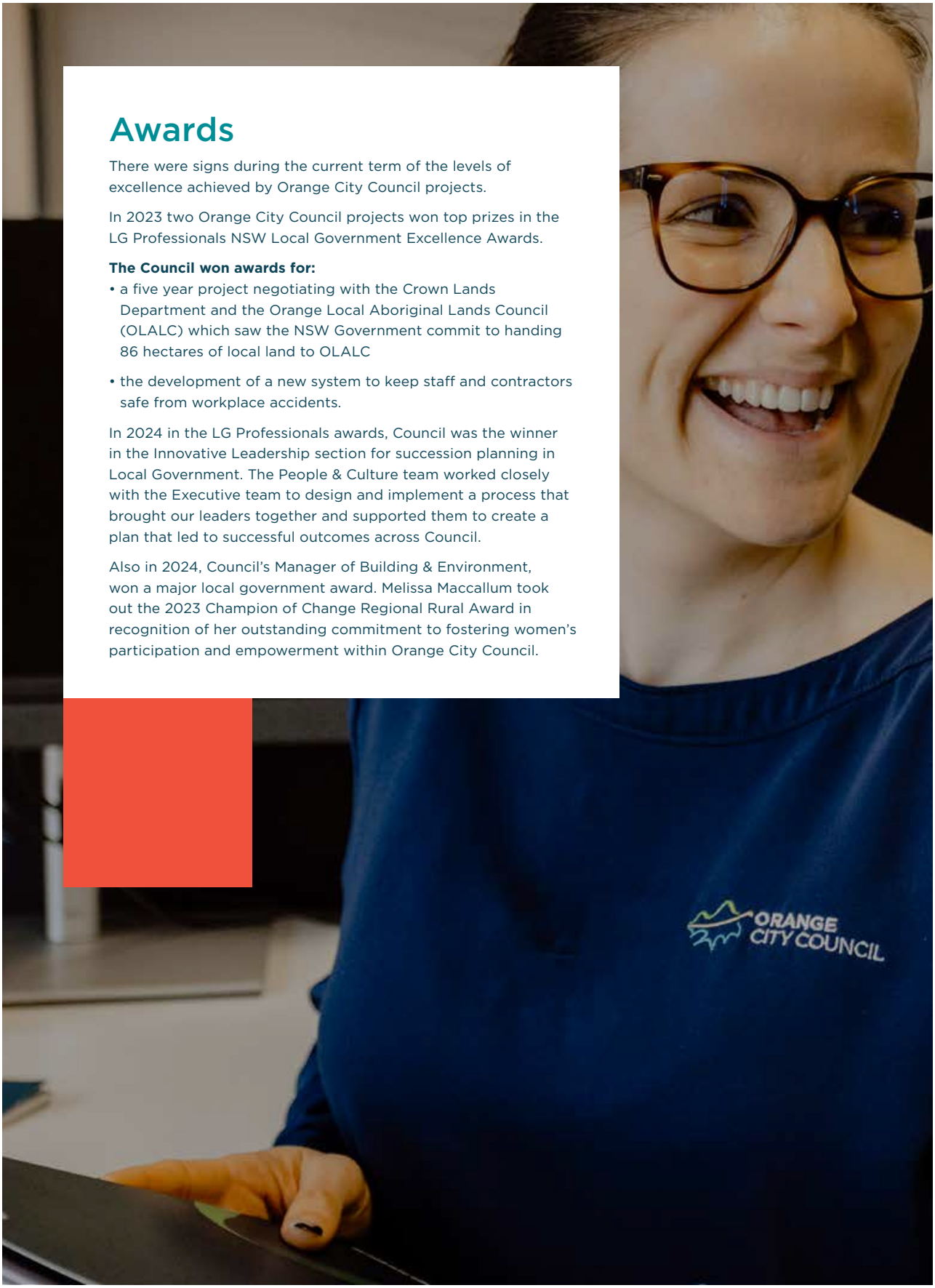

Awards

There were signs during the current term of the levels of excellence achieved by Orange City Council projects.

In 2023 two Orange City Council projects won top prizes in the LG Professionals NSW Local Government Excellence Awards.

The Council won awards for:

- a five year project negotiating with the Crown Lands Department and the Orange Local Aboriginal Lands Council (OLALC) which saw the NSW Government commit to handing 86 hectares of local land to OLALC
- the development of a new system to keep staff and contractors safe from workplace accidents.

In 2024 in the LG Professionals awards, Council was the winner in the Innovative Leadership section for succession planning in Local Government. The People & Culture team worked closely with the Executive team to design and implement a process that brought our leaders together and supported them to create a plan that led to successful outcomes across Council.

Also in 2024, Council's Manager of Building & Environment, won a major local government award. Melissa Maccallum took out the 2023 Champion of Change Regional Rural Award in recognition of her outstanding commitment to fostering women's participation and empowerment within Orange City Council.



Housing

Getting the balance right between making sure Orange has enough land coming online to meet the city's future housing needs was a key focus of the new Housing Strategy researched and adopted during the current term of Council.

The mapping element of the process gave some certainty to landowners and investors about which new areas on the city's current outskirts could be opened up for housing. Community consultation also prompted discussion about water security and affordable housing.

There were more than 900 visits to the YourSay Orange site that's was used to collect feed-back about the draft Housing Strategy. Two face-to-face information sessions were also held.

Issues of community concern also included plans to deliver more diversity in the housing types on offer in Orange and the outward growth of residential estates into agricultural land.

The strategy found Orange has enough secure water yield to service a population of 58,000 by the year 2060, enough water for a medium rate of population growth.

After further consultation, Council adopted the new Housing Strategy in June 2022.

The document aimed to provide a planned delivery of land for housing for the next 20 years.

The strategy also plans for five-yearly reviews to monitor the rate that the new areas are opening up for housing.

Affordable Housing

During the term, Orange City Council took a number of steps in response to the community call for action on affordable housing.

The project with the most potential to pioneer new ways of tackling affordable housing in a strategic way is the Redmond Place project.

In March 2023 Council and Landcom signed an agreement to pioneer a new way of creating housing developments in Orange.

The plan is create a new 25-hectare precinct on Orange's eastern outskirts alongside Redmond Place. The estate will contain at least 300 homes. At least 20% will be designated as affordable housing.

The MOU is aimed at providing affordable housing options for low to moderate income households. The signing of the agreement was a step towards building a more equitable community in Orange.

While Housing affordability is a complex issue that requires a multifaceted response, the Redmond Place project is seen as a constructive contribution.

In November 2023 the next milestone was reached when Council and Landcom signed a Project Delivery Agreement (PDA) which cements the partnership and details future plans for the Redmond Place site.

The Redmond Place development is being designed with innovation, sustainability, and liveability in mind, aiming to set the standard for contemporary new housing developments in Orange and the region. The project is the first to be accepted under the new state-led rezoning pathway for social and affordable housing. Landcom is seeking to gain minimum 5-Star ("Australian Excellence") with the aim of achieving 6-Star ('World Leadership') certification under the Green Building Council Australia's (GBCA's) Green Star - Communities rating scheme.

Building Community

During the term Council delivered a range of community programs reflecting both the need for support and education in key areas, and also the CSP's goal to celebrate diversity and inclusion.

Council activities acknowledged the place of indigenous culture in the life of the city.

An exhibition celebrating local Indigenous people who have contributed to the local community began the Orange NAIDOC Week celebrations in October 2023. The Orange Regional Museum featured a photographic exhibition of local Indigenous community

members who have achieved in a range of fields, from science and arts to sports and culture.

Sights, sounds and tastes from across the world came together each year during annual Harmony Day celebrations.

The free Orange Harmony Day festivities transformed the Civic Square South Court into a sea of colour, music, dance and food as our community came together to celebrate the city's rich cultural diversity.

Community involvement was a key component as Orange Seniors Village Hub was established early in the current term.

The Orange Seniors Village Hub built on the established programs at the Senior Citizens and Pensioners Centre (Nguluwau Ngurang) with funding from the Australian Government's Department of Social Services.

Throughout the term the Village Hub program was ramped up to provide a wider range of social, cultural, physical, educational and artistic activities, designed to build social connections and maintain mental and physical health for older community members.

Funding for the 3-year program ended in 2024 with the focus relying on volunteer coordination in future.

During the term, staff delivered a range of ongoing road safety campaigns. These focused on campaigns to:

- tackle driver fatigue with power naps
- to leave the car at home when celebrating the festive season at their work Christmas party and make a can their Plan B
- National Driver Fatigue Week (21 -27 February), asking drivers of Australia's heavy vehicles to start every shift with the question: 'How will you manage your driver fatigue today?'

Playgrounds

The current term saw a steady increase in the number of neighbourhood playgrounds.

Part of Orange City Council's $10 million FutureCity upgrade of the CBD, a new playground in Matthews Park was designed with a railway theme and operates alongside the park's miniature steam train railway tracks.

During the term, new playgrounds were built at:

- Matthews Park
- Sullivan Reserve
- Larance Park
- Lake Canobolas, and
- Anzac Park

Old playgrounds were renewed at:

- Seiben Park
- Glenroi Oval, and
- Sir Neville Howse Park

New shade structures were installed at:

- Mud Hut playground (Clifton Grove)
- Cook Park swings
- Lady Cutler playground at Sir Charles Cuter Park
- Newport St playground

In July 2022 a temporary indoor playground opened for the first time at the Orange Indoor Tennis Centre to provide a place for children to play during the colder months. Council purchased the inflatable and other equipment and leased them to the operator for the establishment of the service. The playground has continued to operate during Winter each year since then. Council continues to look for a more permanent arrangement for indoor playgrounds.

Alongside playgrounds, Council delivered an increase in neighbourhood sports facilities, including:

- Anzac Park - 2 additional outdoor netball courts built
- Glenroi Oval - 2 outdoor basketball courts built
- Glenroi Oval – new skate park built
- Riawena Oval - new picket fence constructed
- Alf Reed Park (Spring Hill) – half basketball court built
- Sir Jack Brabham Park – female friendly amenities building constructed
- Moulder Park – Bob Russell enclosed sports court built

Council also took a long term approach to the need to plan for play spaces into the future.

In June 2024 a new draft strategy to plan play spaces in Orange for the next 15 years was put on public exhibition for community comment.

Orange has a diverse range of playgrounds across the city, however, as the population grows additional play spaces will be needed.

In May 2024 a $2.4 million upgrade to the Orange Adventure Playground began. After 22 years of use and exposure to the elements the timber structure of the old playground was deteriorating and community demand for an upgraded facility had increased. The project includes dismantling the old playground and constructing a new playground and splash park.




DANGER
CONSTRUCTION SITE
UNAUTHORISED PERSONS KEEP OUT
CONSTRUCTION SITE
UNAUTHORISED PERSONS KEEP OUT
THIS PROTECTIVE EQUIPMENT MUST BE WORN
ALL VISITORS MUST REPORT TO SITE OFFICE
ALL PERSONNEL MUST BE SITE INDUCTED BEFORE STARTING WORK ON THIS SITE
24HR SITE CONTACT PH:

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Sustainability

Environment and sustainability elements continued to take a high priority during the current term with both long-term strategies and short term actions put into effect.

Council decided to source 100% of the power that's needed for large sites and streetlights from renewable energy from January 1, 2023.

This new arrangement, together with Council's renewable energy action plan implemented over the last few years, will reduce its carbon emissions by 30-40 per cent, which is well on the way to achieving the NSW Government's target of 50 per cent emissions reductions by 2030.

In August 2023 almost $1 million worth of upgrades to improve amenities and boost energy efficiency at Wade Park were completed.

The project was funded by the NSW Government's Regional Sport Facility Fund and included:

- Female-friendly upgrades to the toilets, showers and change rooms under the grandstand as well as three new energy efficient hot water heaters.
- Upgrades to the referee room to provide areas for men and women.
- Transforming the old canteen into a suitable storage space.
- Replacing the field lighting with energy efficient LED lighting to improve light quality and reduce energy consumption and maintenance costs
- Installation of a 30kw solar panel system and battery storage

During the term a solar array was installed on the shelter of the new parking area at the Orange Regional Airport, making the facility energy neutral during daylight hours.

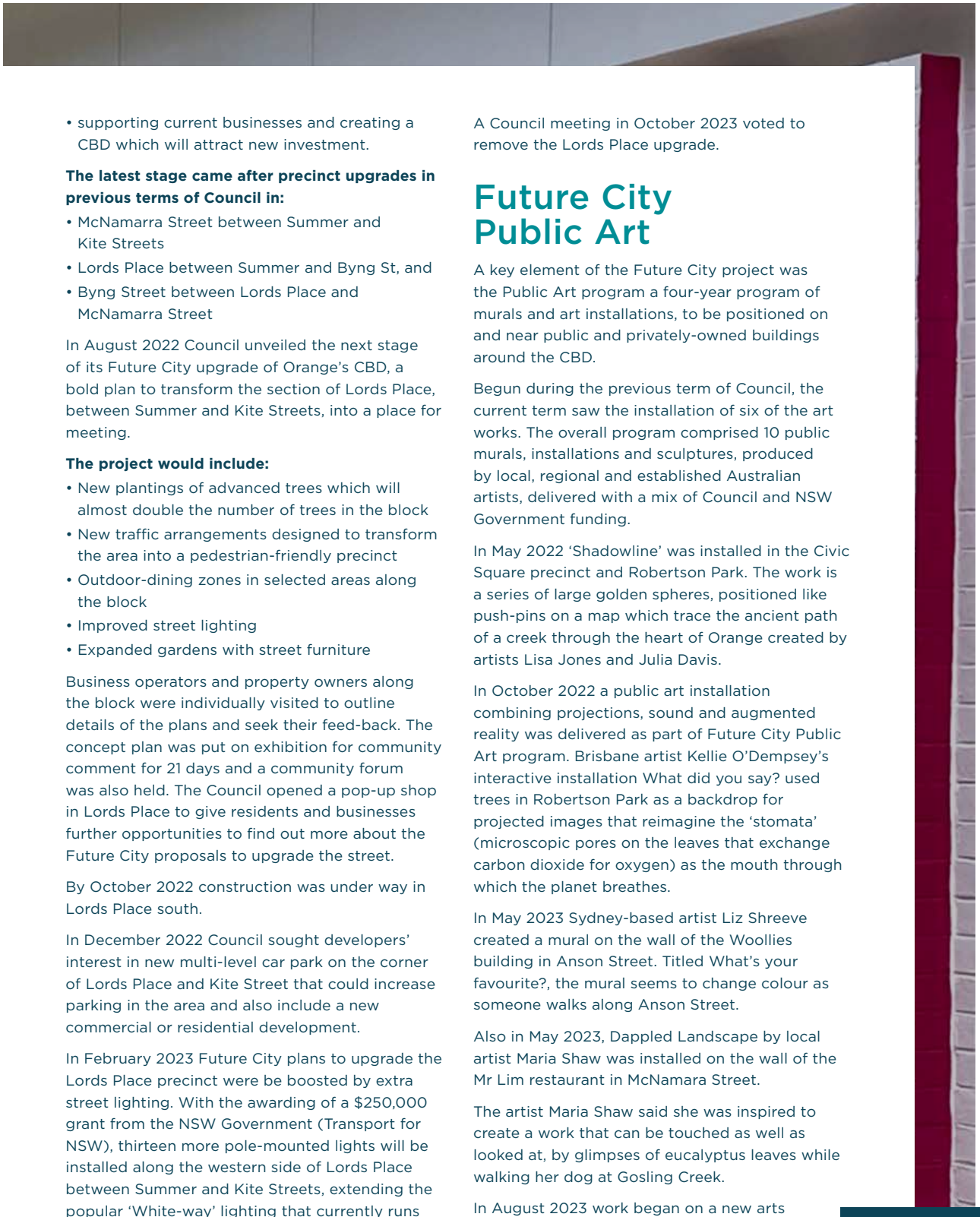
Future City

The next stage of the Future City CBD revitalisation project had mixed success during the term.

The project, which began in 2018 with the appointment of architects and urban designers SJB, continued in 2019 and 2020 with community consultation.

Future City was aimed at:

- making the CBD a more walkable city centre,
- encouraging more people to come to the CBD and spend more time there,



- supporting current businesses and creating a CBD which will attract new investment.

The latest stage came after precinct upgrades in previous terms of Council in:

- McNamarra Street between Summer and Kite Streets
- Lords Place between Summer and Byng St, and
- Byng Street between Lords Place and McNamarra Street

In August 2022 Council unveiled the next stage of its Future City upgrade of Orange's CBD, a bold plan to transform the section of Lords Place, between Summer and Kite Streets, into a place for meeting.

The project would include:

- New plantings of advanced trees which will almost double the number of trees in the block
- New traffic arrangements designed to transform the area into a pedestrian-friendly precinct
- Outdoor-dining zones in selected areas along the block
- Improved street lighting
- Expanded gardens with street furniture

Business operators and property owners along the block were individually visited to outline details of the plans and seek their feed-back. The concept plan was put on exhibition for community comment for 21 days and a community forum was also held. The Council opened a pop-up shop in Lords Place to give residents and businesses further opportunities to find out more about the Future City proposals to upgrade the street.

By October 2022 construction was under way in Lords Place south.

In December 2022 Council sought developers' interest in new multi-level car park on the corner of Lords Place and Kite Street that could increase parking in the area and also include a new commercial or residential development.

In February 2023 Future City plans to upgrade the Lords Place precinct were be boosted by extra street lighting. With the awarding of a $250,000 grant from the NSW Government (Transport for NSW), thirteen more pole-mounted lights will be installed along the western side of Lords Place between Summer and Kite Streets, extending the popular 'White-way' lighting that currently runs along Summer Street.

A Council meeting in October 2023 voted to remove the Lords Place upgrade.

Future City Public Art

A key element of the Future City project was the Public Art program a four-year program of murals and art installations, to be positioned on and near public and privately-owned buildings around the CBD.

Begun during the previous term of Council, the current term saw the installation of six of the art works. The overall program comprised 10 public murals, installations and sculptures, produced by local, regional and established Australian artists, delivered with a mix of Council and NSW Government funding.

In May 2022 'Shadowline' was installed in the Civic Square precinct and Robertson Park. The work is a series of large golden spheres, positioned like push-pins on a map which trace the ancient path of a creek through the heart of Orange created by artists Lisa Jones and Julia Davis.

In October 2022 a public art installation combining projections, sound and augmented reality was delivered as part of Future City Public Art program. Brisbane artist Kellie O'Dempsey's interactive installation What did you say? used trees in Robertson Park as a backdrop for projected images that reimagine the 'stomata' (microscopic pores on the leaves that exchange carbon dioxide for oxygen) as the mouth through which the planet breathes.

In May 2023 Sydney-based artist Liz Shreeve created a mural on the wall of the Woollies building in Anson Street. Titled What's your favourite?, the mural seems to change colour as someone walks along Anson Street.

Also in May 2023, Dappled Landscape by local artist Maria Shaw was installed on the wall of the Mr Lim restaurant in McNamara Street.

The artist Maria Shaw said she was inspired to create a work that can be touched as well as looked at, by glimpses of eucalyptus leaves while walking her dog at Gosling Creek.

In August 2023 work began on a new arts project showcasing local dancers and

promoting the importance of a nationally significant local bee collection.

The new groundbreaking artwork, 'Dancing With Bees' was about showcasing local talent and highlighting the importance of bees contributing to how the environment functions.

Local dancers were immortalised in the video artwork with two large screens installed on the exterior of the Orange Civic Theatre. One screen shows the local dancers interpreting the movement of bees and the second shows images taken from the Department of Primary Industries bee collection. The video artwork was created by award-winning artist Zanny Begg whose work has been shown in exhibitions both in Australia and internationally.

In March 2024 the final two pieces of Orange City Council's Future City public art project were unveiled on the same day. Zanny Begg's Dancing with Bees and Daniel Templeman's Aperture were officially launched at the Civic Square South Court at 7pm, before moving up to the laneway at 215 Summer Street. At the Summer St location, a light installation had been installed on the ceiling of the laneway, making the laneway a safer and more attractive place. The project was about visual improvements but also has a focus on discouraging antisocial activity and improving safety.

Festivals

Two new festivals were organised by Council staff.

The inaugural Orange Rainbow Festival happened in March 2024 to celebrate and support LBGTQIA+ young people while fostering inclusion, acceptance and unity within our community. The event attracted thousands of participants.

The announcement of the festival promoted a vigorous community debate, but a Council meeting voted to support the event

Promotion is well under way for the Zest Fest event, a 1-day music festival planned for November 2024. This was funded by the Transport for NSW open streets grant and will be held in Robertson Park and the adjoining streets, McNamara Lane, Lords Place and Byng Street.

Waste

In March, 2024 Orange celebrated 10 years of the food and garden waste collection.

The green-lidded bin or Food Organics/Garden Organics (FOGO) service offers residents a convenient way of disposing of food scraps and garden waste, which is turned into high-quality, low-cost compost they can purchase for their gardens.

It was estimated that in the last six months of 2023 the FOGO service kept 3856 tonnes of organic waste out of landfill. Orange was the first regional council in NSW to introduce the service, in mid-2013.

Water

The long of list of water projects set to be studied in a new multi-million-dollar business case

analysis, is highlighting the region's long-term water security.

After years of lobbying, Council welcomed the announcement by the Australian and NSW Governments to invest $17 million to develop final business cases for water infrastructure projects which could help to drought proof Orange and the central west.

The list of projects for analysis include:

- Changing the operational rules governing when and how much water from the
- Macquarie River can be pumped to Orange using the Macquarie pipeline.
- Seeking funding to build a pilot plant to use purified recycled water from the Orange
- Wastewater Treatment Plant
- Supplying water to upper Macquarie towns from the Fish River or Coxs River catchment
- Supplying water to Orange from the Lachlan Valley.
- Continuing to use demand management strategies which encourage residents to use less water.

An initiative to explore Purified Recycled Water (PRW) is the next direction Orange City Council could explore, following the announcement of funding for a preliminary business case during the current term.

The plan is to build a demonstration plant, that would trial the effectiveness of the PRW option in local conditions and show the benefits to the community.

Currently, treated effluent from Orange's Waste Water Treatment Plant is sent, as needed, via a pipeline to the Cadia gold mine (Australia's largest gold mine). When this water is not needed by the mine, it is released into Summer Hill Creek.

The intention is that the output of the demonstration plant would continue to be sent as needed to the mine or released with improved quality water into the creek.

The demonstration plant would produce around 3.5 ML of water per day, around a quarter of Orange's daily water needs.

Building on the success of Orange's pioneering stormwater harvesting scheme, the results of a survey unveiled in February 2023 showed the Orange community is open to purified recycled water (PRW) being part of the city's water supply in the future.

The survey, commissioned and independently conducted by international design, engineering and advisory business Aurecon, found the Orange community has a high level of trust in Orange City Council to deliver a high-quality water supply.



2021_
2024

ORANGE CITY COUNCIL

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ORANGE CITY COUNCIL

Community Engagement Survey

Results - 2023

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Introduction

In 2023, Orange City Council joined with Cowra Shire, Oberon and Weddin Shire councils as part of a Central NSW Joint Organisation (JO) procurement to undertake a Community Engagement Survey as mandated by the Office of Local Government's Integrated Planning and Reporting (IP&R) Framework.

The Orange Community Strategic Plan 2032 (CSP) *"documents the aspirations and priorities of our community. It sets out a long-term vision for the region to 2032 and identifies the key priorities and strategies for achieving this".*

This survey will:

- Set benchmarks around how those aspirations and priorities are being met by Orange City Council.
- Measure community satisfaction with Council's services and facilities
- identify any other key issues from residents and visitors to the city

In consultation with the councils, the JO engaged Woolcott Research and Engagement to undertake the project.

Method

In Orange the project work was undertaken in two parts:

- A quantitative study (Main Survey) was conducted comprising 300 responses via a combination of random telephone interviews and through an online research only panel (A sample of this magnitude has a sampling error of +/- 5.63% at the 95% Confidence Level)
- An online survey (Open Survey) was conducted using Orange Your Say where 589 questionnaires were completed.

The fieldwork was conducted between 24 Augst and 23 September 2023.

The survey was divided into a number of categories including:

- Demographics
- Usage
- Council Facilities
    - Cultural Services and Civic Spaces
    - Sports Facilities, Recreation Areas and Open Space
    - Community Services
    - Infrastructure
    - Commercial and Semi-Commercial Spaces
- Infrastructure
    - Condition of roads surfaces
    - Parking
    - Condition of footpaths
    - Provision of cycle paths
    - Bus stops/shelters
    - Taxi ranks
    - Bike racks
- Commercial and semi-commercial services
    - Orange Airport
    - Orange Visitor Information Centre
    - Orange City Pound
    - Lake Canobolas Scout Camp
    - Colour City Caravan Park
- Supporting new and emerging businesses
- Environment and waste
- Water and sewer

Demographics

The demographics of participants are as follows:

Demographics

Male 50%
(49% in Open Survey)

Female 50%
(49% in Open Survey)

7% speak a language other than English at home
(8% in Open Survey)

10% identify as living with a disability
(9% in Open Survey)

5% identify as being Aboriginal and / or Torres Strait Islander
(7% in Open Survey)

		Main Survey (n=300) %	Open Survey (n=589) %
Age	18 to 34	30	30
	35 to 54	32	32
	55-69	21	21
	70+ years	17	17
	Prefer not to say	1	1
Employment Status	Working full-time	49	50
	Retired	25	19
	Working part-time	13	9
	Self-employed	7	10
	Unemployed	1	-
	Household duties/ caring for children	1	5
	Student	-	2
	Other	5	5

- 1 in 10 respondents identify as living with a disability.
- Approximately half of residents work full-time. Another quarter are retired.
- Those within the Open survey were less likely to be retired.

Demographics

75% of **Main Survey** participants own their home through mortgage or outright

21% of participants rent

4% of participants prefer not to say

75% of **Open Survey** participants own their home through mortgage or outright

17% of participants rent

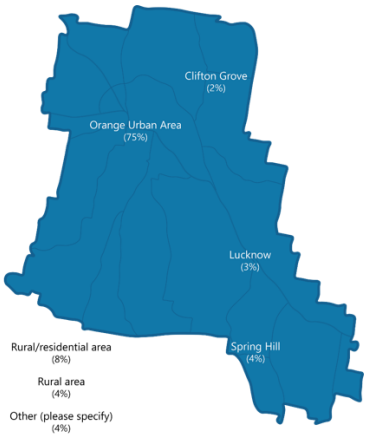
7% of participants prefer not to say

		Main Survey (n=300) %	Open Survey (n=589) %
Approximate Household Income	Less than $50,000	19	12
	Between $51,600 and $80,000	18	18
	Between $81,000 and $100,000	16	10
	Between $101,000 and $150,000	13	21
	More than $151,000	22	23
	Do not wish to answer	13	16
Number of People in Household (Including Participant)	One	14	12
	Two	32	38
	Three	22	17
	Four	21	19
	More than four	10	15

- Three quarters of residents own their home through mortgage or outright.
- Approximately a third of respondents live with one other person in their household.

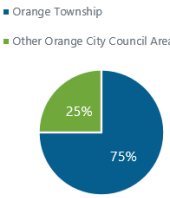
ORANGE CITY COUNCIL

Demographics

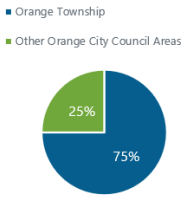


Area of Residence (Main Survey)

How long have you lived in the Orange City Council area?	Main Survey (n=300) %	Open Survey (n=589) %
Up to 5 years	12	17
6 to 10 years	4	10
11 to 15 years	3	10
More than 15 years	80	62



Area of Residence (Main Survey)

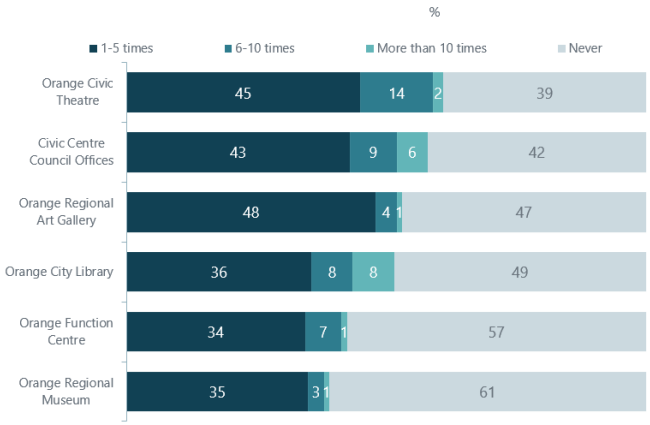


Area of Residence (Open Survey)

- Three quarters of residents reside in the Orange Township.
- 80% of residents have lived in the Orange City Council area for more than 15 years.

Usage

Cultural Services and Civic Spaces
Usage

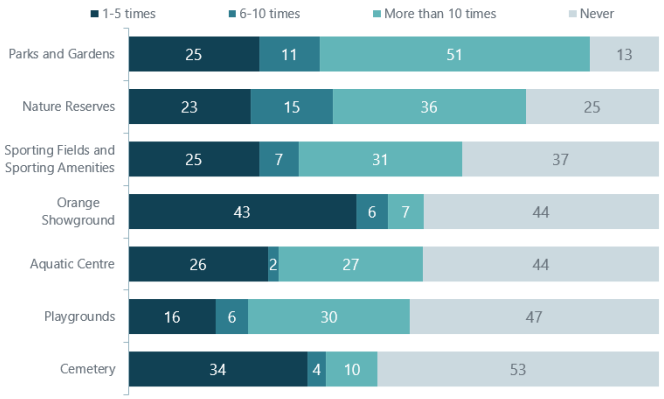


Open Survey: Respondents who have used the following facilities in the last 12 months (%)
62
53
54
67
45
55

- Residents who used cultural services and civic spaces were most likely to only use them between 1 to 5 times in a year.
- Those in the open survey were more likely to have frequented the Library and the Museum than resident within the main survey.

Sports Facilities, Recreation Areas and Open Space

Usage

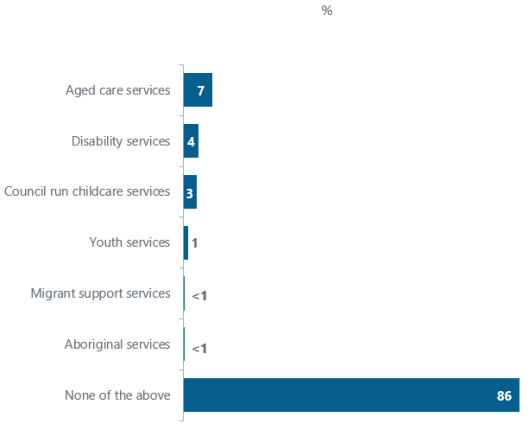


Open Survey: Respondents who have used the following facilities in the last 12 months (%)
95
93
66
70
56
66
41

- There was high visitation levels reported for parks and gardens (87%) and nature reserves (74% last 12 months).
- Less frequented spaces included the cemetery and playgrounds (47% and 53%).
- Residents from outside the township were less likely to have used these areas in the last 12 months.

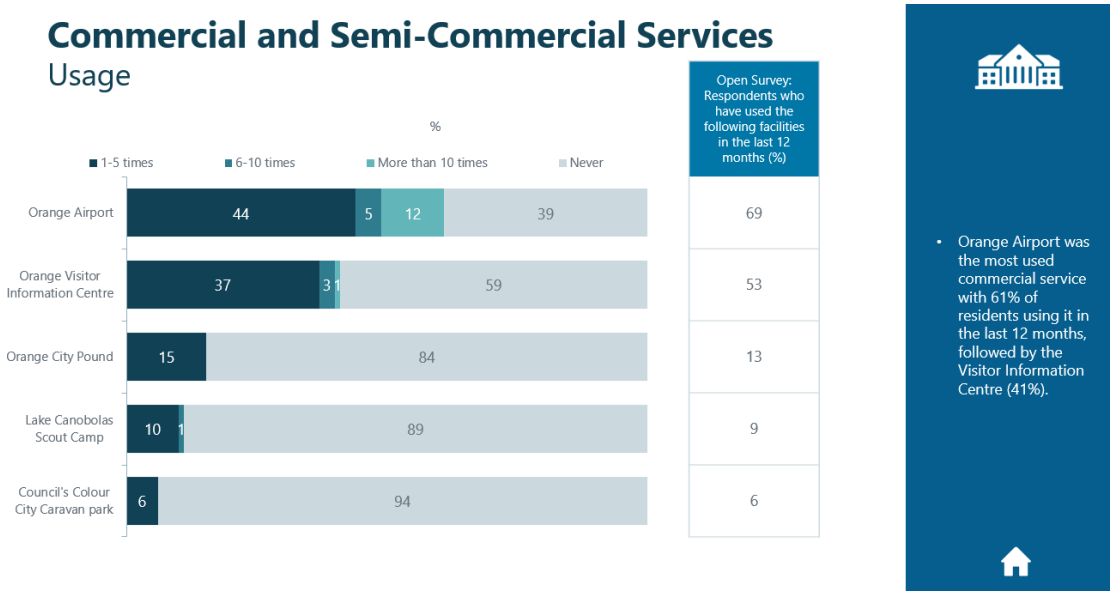
Community Services

Usage



Open Survey: Respondents who have used the following facilities in the last 12 months (%)
4
2
4
3
1
2
88

- The majority of residents had not used any of these facilities in the past 12 months.
- 7% of respondents had used aged care services in the last year.



Results

The nature of the survey delivered a mix of quantitative and qualitative data.

To assess these together a quadrant analysis has been used to indicate the relationship between perceived importance and satisfaction.

In short, the top two quadrants represent higher satisfaction and the bottom two quadrants lower satisfaction. The left two quadrants are lower importance and the right two quadrants higher importance.

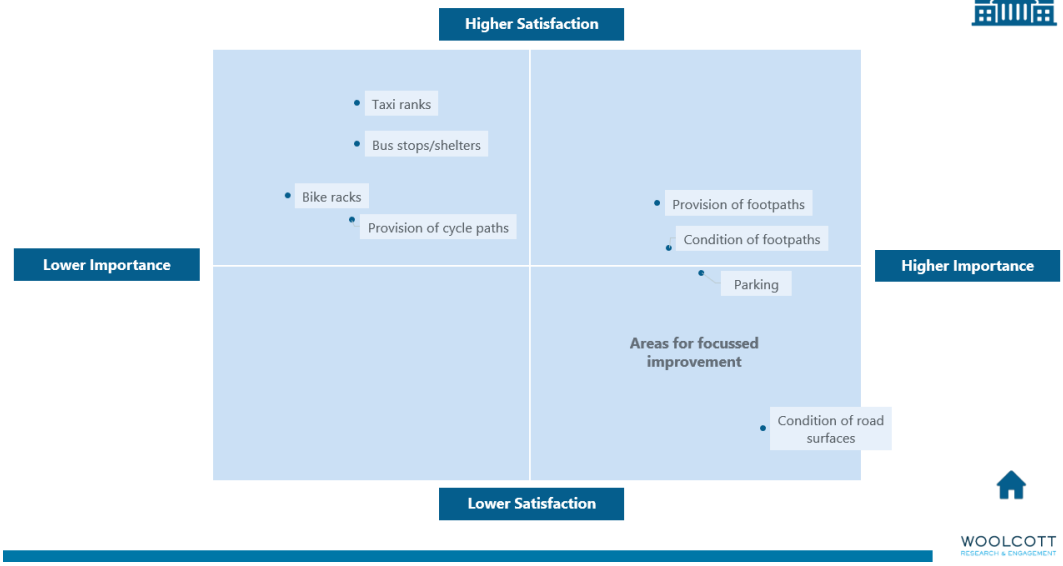
If for example a service lands in the bottom left quadrant it is of lower satisfaction but also of lower importance.

Services that land in the top left quadrant are of lower importance but higher satisfaction. In the top right quadrant, services that score here are both of higher importance and satisfaction.

The bottom right quadrant is the area for focussed improvements as services that score here are of higher importance and lower satisfaction.

Quadrant analysis results

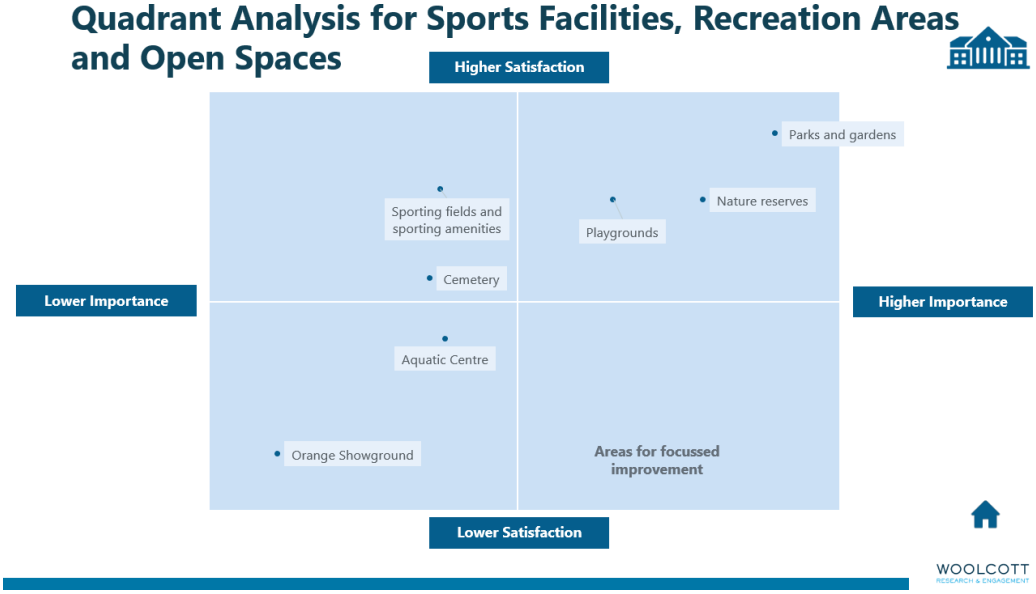
Quadrant Analysis for Infrastructure



The areas of infrastructure areas perceived to be most important were the condition of road surfaces (96%) and parking (83%) and to a lesser extent, condition and provision of footpaths.

Areas of lower importance were bike racks (17%) and taxi ranks (23%).
Levels of satisfaction across the areas of infrastructure were relatively low, with the highest being for taxi ranks (39%) and lowest for the condition of road surfaces (6%).

Quadrant Analysis for Sports Facilities, Recreation Areas and Open Spaces



Orange Showground had the greatest difference between its rating of importance and the level of satisfaction (30% gap), followed by the aquatic centre (16%) and nature reserves (14%).

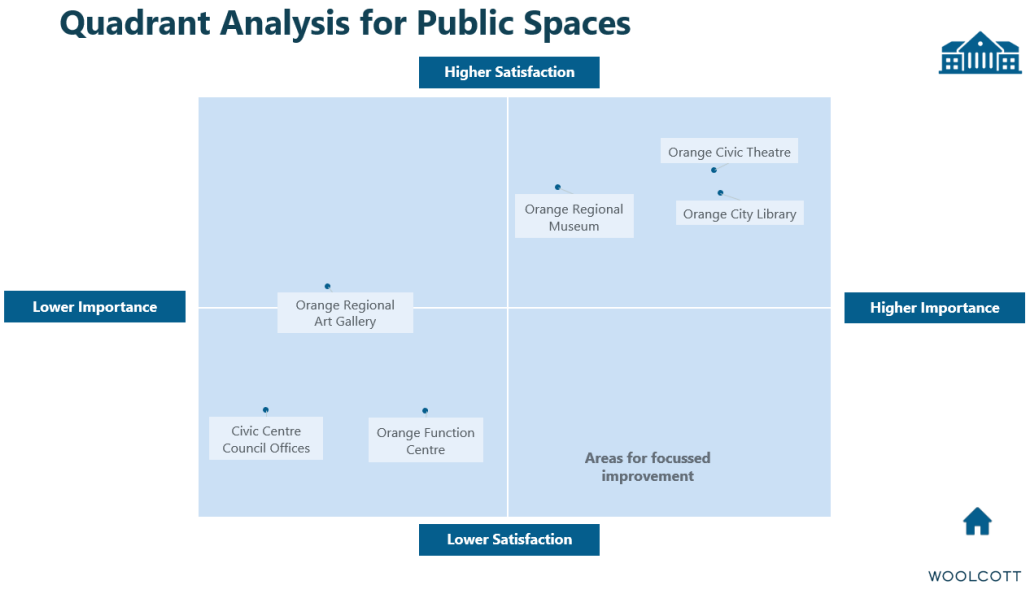
The sporting fields on the other hand, achieved high levels of satisfaction compared to their importance scores.

87% of respondents had visited parks and gardens in the last 12 months. Less frequented spaces included the cemetery and playgrounds (47% and 53%).

The areas and spaces rated as most important to residents were nature reserves (93% of respondents) and parks and gardens (90%), the least important to emerge was the Orange Showground (59%).

When looking at the difference between importance and satisfaction, the Orange Showground had the greatest gap, achieving a higher importance score than the level of reported satisfaction (30% gap), followed by the aquatic centre (16%) and nature reserves (14%) which suggests these maybe areas for future improvement (albeit low priority).

On a more positive note, the sporting fields achieved high levels of satisfaction compared to their importance scores.



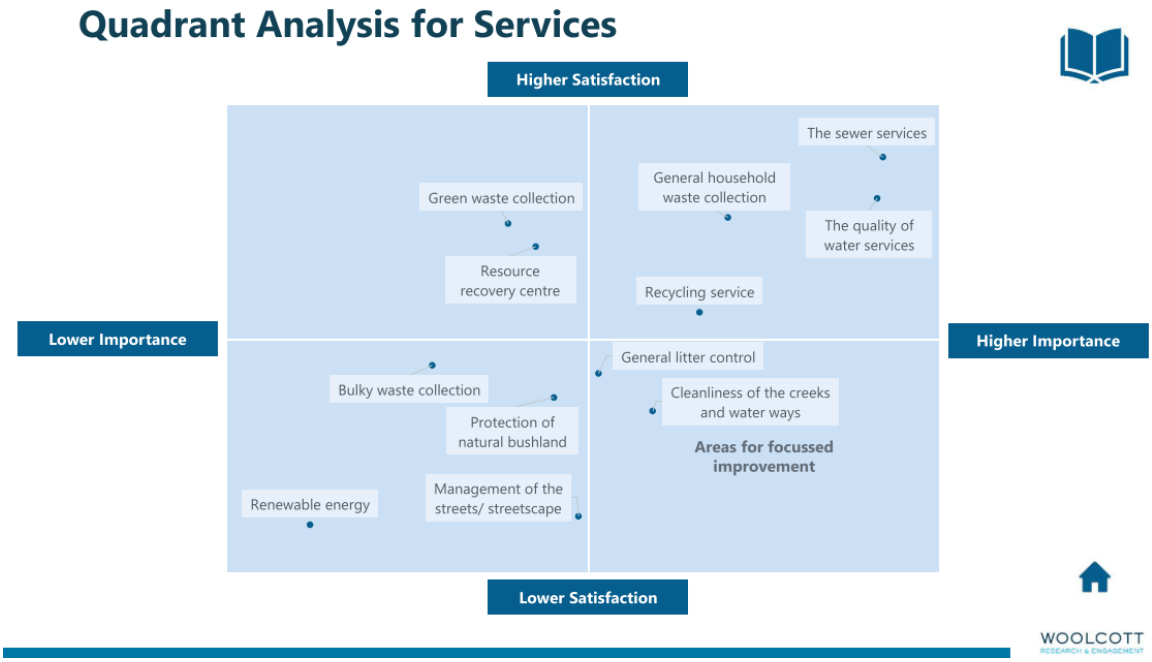
Of less importance were the Civic Centre Council offices and Orange Regional Art Gallery.
For all cultural services and civic spaces (in both the main and open survey), the level of satisfaction was higher than their importance rating.

In absolute terms, there was lower satisfaction with the Civic Centre Council Offices and the Gallery.

Respondents who used cultural services and civic spaces were most likely to visit them between 1 to 5 times a year, with the most frequented being the Orange Civic Theatre, the Council offices, and the Regional Art Gallery.

Spaces rated as most important to residents were Orange Civic Theatre (67%) and Orange City Library (61%).

For all cultural services and civic spaces (in both the main and open survey), the level of satisfaction reported was higher than the importance rating, implying that there is less of an urgent need for focused improvements in this area.



Satisfaction with the sewer services and the quality of the water was high, particularly amongst the 55+ year olds, but lower amongst those 35-54 years.

A high proportion of residents saw sewer and water services to be important (99% and 97% respectively).

Almost 4 in 10 residents living out of the township were not connected to water or sewer services.

Satisfaction levels for general household waste collection and the green waste collection service were high.

The areas where importance out rated satisfaction levels were in general litter control and recycling services.

Respondents 55+ were significantly more likely to be extremely satisfied with all waste management areas.

General household waste collection, recycling services, and general litter control were rated the most important services.

Compared to the township, residents outside tended to be less likely to rate general household waste collection, recycling services, and green waste collection service as important.

The area where there was the greatest difference between the level of importance and current satisfaction was for the management of the streetscape.

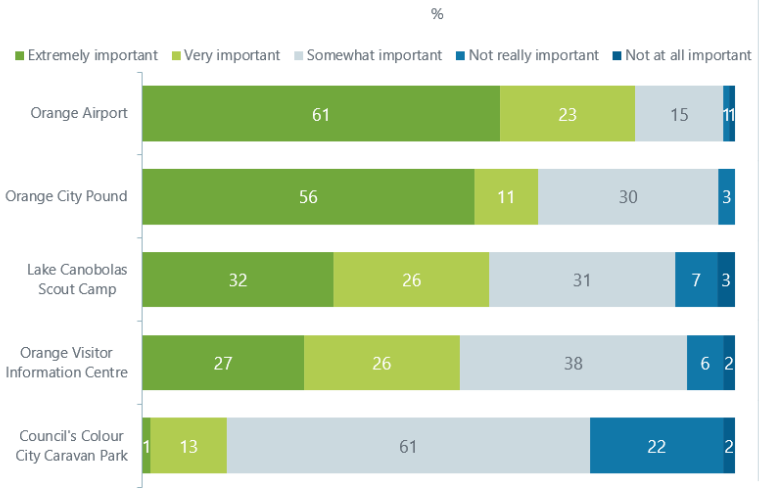
All areas were deemed important, especially the cleanliness of the creeks and water ways, streetscape management and the natural bushland.

Of lesser importance was renewable energy.

Commercial and Semi-Commercial Services

Commercial and Semi-Commercial Services

Perceived Importance



Top 2 Importance Box Main Survey (%)	Top 2 Importance Box Online Survey (%)
84	72
67	50
58	43
53	39
14	25

Orange Airport was the most used commercial service with 61% of residents using it in the last 12 months, followed by the Visitor Information Centre (41%).

The most important services to residents was the Orange Airport and the Orange City Pound (particularly amongst those 55+ - 79%).

Satisfaction levels were highest for Orange Airport (82%) and the Orange Visitor Information Centre (73%).

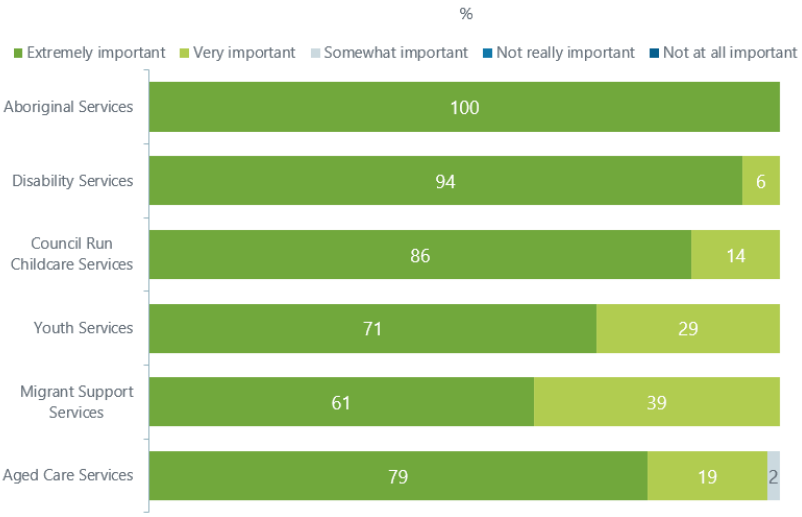
Although base sizes were small, the Council's Colour City Caravan Park and Orange City Pound saw the lowest levels of satisfaction.

Under supporting new or emerging businesses, 44% of respondents felt that Council did not support new or emerging local businesses well. A further 23% did not know. The main reasons for feeling that Council did not support new and emerging local business, was due to a lack of awareness or promotion of support.

Community Services

Community Services

Perceived Importance



	Top 2 Importance Box Main Survey (%)	Top 2 Importance Box Online Survey (%)
Aboriginal Services	100	89
Disability Services	100	68
Council Run Childcare Services	100	89
Youth Services	100	76
Migrant Support Services	100	68
Aged Care Services	98	67

The majority of residents had not used any of these facilities in the past 12 months.

7% of respondents had used aged care services in the last year.

Despite the small base sizes, most residents regarded these Community Services as important.

Very few residents had used these services however satisfaction was relatively high, particularly for Council run childcare services, Aged care, migrant support and Disability services.

Liveability

The survey also tested community responses to liveability.

There were high levels of agreement that Orange was ‘a friendly place to live’ (77%), and that residents are ‘proud’ of the area (75%).

Interestingly, only 30% of respondents 18-34 agreed that Orange is ‘friendly’, compared to 89% of respondents 55+.

There was lower levels of agreement with the statement that ‘it is affordable to live in the region’ (28%) and less strong agreement that there is adequate employment/business opportunities.

Interactions

The survey also looked at interactions between the community and Council.

Customer Service

Most Recent Reason for Contacting Council

	Main Survey (n=135) %	Open Survey (n=334) %
Building/planning enquiry	22	21
Roads	19	26
Rates	19	23
Garbage or recycling	16	22
Dogs/animals	15	22
Water	13	12
Other	23	18

Of the respondents who had contact with Council in the last 12 months, 7 in 10 were satisfied with the interaction.

Building/planning enquiries (22%) and roads (19%) were the most common reasons for contacting Council.

Rates, garbage or recycling, and dogs/animals were also common reasons to contact Council for open survey respondents.

Those residing out of the township were significantly less likely to be satisfied (51% as opposed to 76% for those within the Township).

Customer Service

Method of Most Recent Contact

	Main Survey (n=135) %	Open Survey (n=334) %
On the phone	36	33
Council's customer service centre	17	14
Email	16	15
Onsite with Council officer	11	5
Meeting with Council officer	7	7
Online (via Council's website)	5	13
Letter	1	2
Spoke to local Council staff	1	2
Speaking with elected Councillor	<1	5
Snap Send Solve	<1	1
Other	4	4

The most common method of contacting Council was via phone.

How do you find out about Council services and activities?	Main Survey (n=300) %	Open Survey (n=589) %
Social media (Facebook, Instagram)	55	59
Pamphlet or letterbox drop	45	34
Local media (papers, radio, TV)	40	45
Email	40	33
Council website	29	45
Council 'Noticeboard' page in local newspaper	25	18
Local online news websites	25	27
Newsletter (digital format or hardcopy)	23	22
In person at Council Chambers	12	4
Do not have a preference	3	9
Other	<1	1

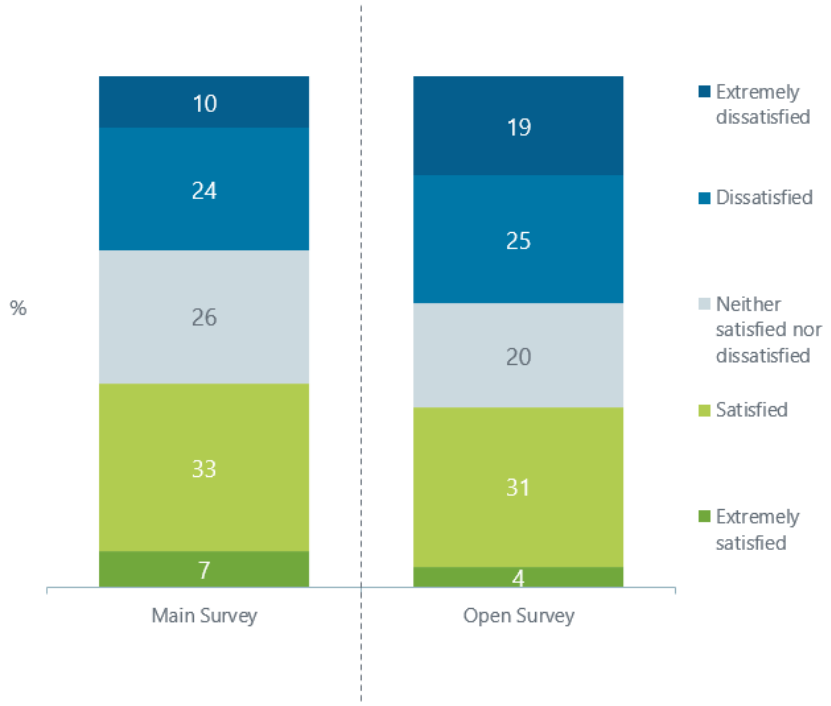
46% of residents were satisfied with the level and type of communication provided by Council. Those living outside of the township and 35-54 were more likely to be dissatisfied (41% and 44%).

Social media emerged as the main avenue for finding out about Council services and activities (55%).

Preferred method of being consulted on important Council initiatives	Main Survey (n=300) %	Open Survey (n=589) %
Surveys	29	35
Social Media (Facebook, Instagram)	29	28
Council's online engagement platforms	12	16
Face to face information forums	9	6
Council meetings	6	2
Community pop up or drop in events	4	5
Email	2	1
Mail/letterbox drop	2	1
Newspaper	1	1
I do not want to be consulted	4	4
Other	3	2

57% of residents were dissatisfied with the level of community involvement in decision making, with a significantly high proportion of 35-54 year olds being dissatisfied (72%).

Overall Satisfaction with Council



4 in 10 residents were satisfied with the overall performance of Council in providing services to the community.

Roughly, 3 in ten were dissatisfied and 3 were neither satisfied or dissatisfied.

31% of residents were dissatisfied because they felt that Council spends money on unnecessary projects.

Other common reasons included there not being enough community communication and consultation (22%), and roads being in a bad state (21%).

Whilst one in five felt Council provided value for money, 43% of residents thought the services provided by Council represented quite poor or very poor value for money, especially those 35-54 (57%).

44% of respondents who perceived Council's services as quite good or very good value for money were happy with the services and felt that their needs were met.

Despite the positive rating, 18% of respondents thought that Council could do better.

The most common reason for respondents perceiving Council's services as neither good nor poor value for money was the Council rates being very high (20%).

Other common reasons for this rating are Council making poor decisions (19%) and generally thinking that they could do better (18%).

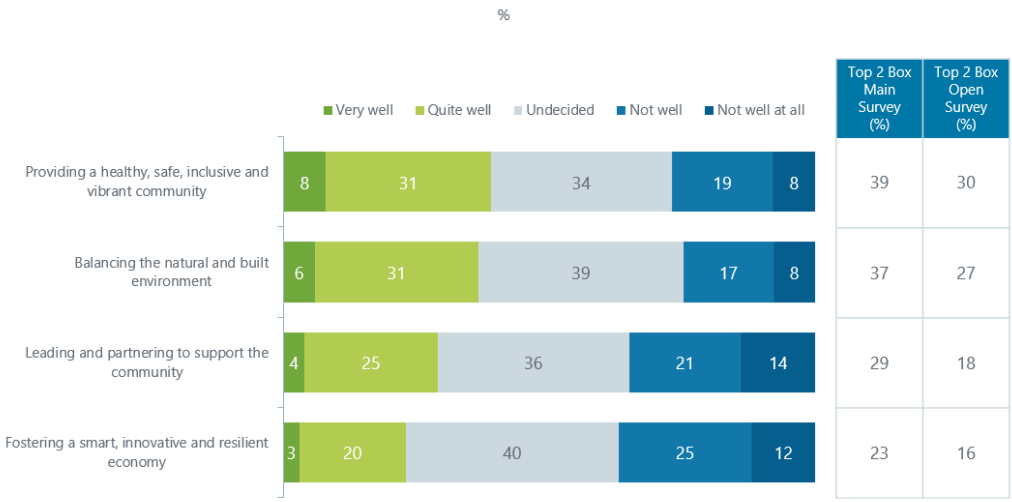
The most common reason for respondents perceiving Council's services as poor value for money was the Council making poor decisions and wasting money on unwanted projects (37%).

Other common reasons for rating Council poorly was because of road conditions (20%) and Council rates being too high (18%).

Community Strategic Plan

The survey sought feedback on delivering on the Community Strategic Plan.

Strategy Performance by Council in last 5 years



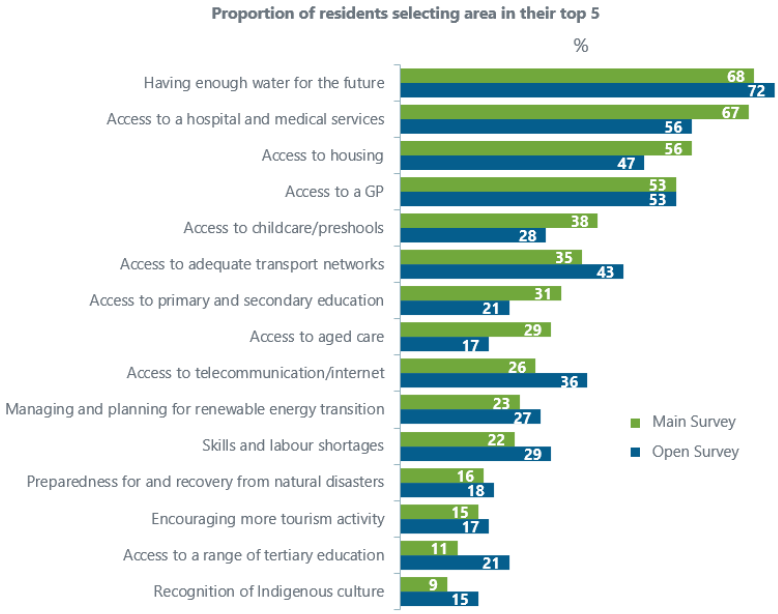
	Top 2 Box Main Survey (%)	Top 2 Box Open Survey (%)
Providing a healthy, safe, inclusive and vibrant community	39	30
Balancing the natural and built environment	37	27
Leading and partnering to support the community	29	18
Fostering a smart, innovative and resilient economy	23	16

39% of residents felt that Council was 'providing a healthy, safe, inclusive and vibrant community' very or quite well.

The area Council was believed to be underperforming was in 'fostering a smart, innovative and resilient economy.'

Concerns for the region

Top 5 Current Areas of Concern for the Region



The biggest specific area of concern for the region was having enough water for the future. This was followed by having access to hospital and medical services and access to a GP.

Conclusions

Levels of satisfaction with Council's performance were mixed. With a 4 in ten satisfied, and a third dissatisfied.

The most frequently mentioned reason for dissatisfaction was a perception that there has been money spent on unnecessary projects and some questionable decisions.

The key areas for focussed improvement across the facilities and services emerged as:

- Orange Showground
- Aquatic centre
- Nature reserves
- The condition of road surfaces
- Management of the streetscape
- Cleanliness of the creeks and waterways
- General litter control
- Recycling services

Whilst residents are largely happy with living in Orange, they would like to see Council providing more support for new or emerging local businesses, and doing more to foster a smart, innovative and resilient economy. Many also complain of the lack of affordability and employment/business opportunities in the LGA.

Interactions with Council are quite positive (less so amongst those out of town), however residents could be more engaged and involved with Council decision making, particularly 35-54 year olds.

Social media or the Council website are preferred avenues of engagement.

In a broader context, there is concern about areas regarding the environment and health (access to hospitals, medical services and GPs), however the single biggest area of concern for the future is having enough water.

5.2 ANNUAL REPORT 2023/2024

RECORD NUMBER: 2024/1697
AUTHOR: David Waddell, Chief Executive Officer

EXECUTIVE SUMMARY

Under s428 of the Local Government Act, Council must prepare and endorse an Annual Report within five months of the end of the calendar year.

The report must outline Council's achievements in implementing its Delivery Program through the year's Operational Plan, and report on the effectiveness of the principal activities undertaken to achieve the objectives in that year.

The report must contain Council's audited financial statements prepared in accordance with the Code of Accounting Practice and Financial Reporting.

At the time of writing the Office of Local Government has approved an extension of Council's audited financial statements. These will be brought to a future meeting of the Council to endorse.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "18.1. Provide representative, responsible and accountable community governance".

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

Nil.

RECOMMENDATION

That Council endorse the Annual Report 2023/2024, publish the report on Council's Website and notify the Office of Local Government.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Council's Annual Report outlines key achievements and performance against service and commitments outlined in the Delivery Program and Operational Plan, for the financial year 1 July 2023 – 30 June 2024.

The achievements are aligned to the strategic directions of the Community Strategic Plan

The Annual Report will include Council's audited financial statements appended (when complete) and a range of information required by legislation.

The Annual Report must be finalised within five months of the end of the financial year (by 30 November), published on Council's website and notified to Office of Local Government.

The Annual Report will be available on Council's Website at https://www.orange.nsw.gov.au/plans-and-policies/annual-report/ and a copy will also be provided to Councillors at the meeting.

5.3 COUNCIL ADVOCACY ACTIVITIES - 1 JULY 2023 - 30 JUNE 2024

RECORD NUMBER: 2024/242
AUTHOR: Catherine Davis, Executive Support Manager

EXECUTIVE SUMMARY

As part of Council's Corporate Planning and Reporting it is necessary to report to Council activities showing most recent advocacy on emerging strategic matters important to the City and region as well as report on meetings and interactions with key lobby groups. This report is for the information of the new Council and is up to and including 30 June 2024 so as to keep the reporting period to a Financial Year cycle.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "17.1. Work in partnership with other Councils, regional organisations and State and Federal Governments".

FINANCIAL IMPLICATIONS

Any travel or accommodation associated with such activities are allowed for as part of staff and Councillor travel budgets.

POLICY AND GOVERNANCE IMPLICATIONS

Nil

RECOMMENDATION

That the report by the Executive Support Manager on Council Advocacy Activities 1 July 2023 to 30 June 2024 be noted.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Advocacy Group	Minister	Matter
Regional Cities NSW 1 August 2023	Delegation Meeting with The Hon Paul Scully, Minister for Planning and Public Spaces; Advisor to NSW Premier; NSW Treasurer; The Hon Rose Jackson MLC Minister for Water; Janelle Saffin MP Parliamentary Secretary for Disaster Recovery	Population growth occurring across Regional NSW; requesting an increase in the supply of social and affordable housing in regional areas; meeting skills challenges and supporting regional businesses; strategic roll-out of Workplace Hubs in regional cities; regional port connectivity; regional freight connectivity; local and regional roads and investment in such to meet future challenges of climate change; investment in liveability, civic and

Advocacy Group	Minister	Matter
		community facilities in regional cities; improvement of digital connectivity in regional NSW; water security for growing regional cities.
CNSWJO 08 August 2023	The Hon Paul Scully, Minister for Planning and Public Spaces. The Hon Jihab Dib, Minister for Customer Service and Digital Government, Minister for Emergency Services, and Minister for Youth Justice	Flood recovery
OCC 08 August 2023	Minister Paul Scully, Minister for Planning and Public Spaces; Local Member Phil Donato.	Social and affordable housing priorities in regional areas
CNSWJO 24 August 2023	Ms Stephanie Cooke MP Shadow Minister for Water and Shadow Minister for Crown Lands.	The following issues/matters were tabled with all Ministers: Water security, funding responsiveness for natural disaster recovery, housing crisis, Safe Swift and Secure Link between Central NSW and Sydney, Emergency Services Levy
	Mr Dugald Saunders, MP Shadow Minister for Regional NSW and Shadow Minister for Agriculture and Natural Resources	
	The Hon Courtney Houssos, MLC Minister for Finance and Minister for Natural Resources	
	Dr Michael Holland, MP Parliamentary Secretary for Health and Regional Health	
	The Hon Tara Moriarty, MLC Minister for Agriculture, Minister for Regional NSW and Minister for Western NSW	
	The Hon Paul Scully, MP Minister for Planning and Public Spaces	
	The Hon Bronwyn Taylor, MLC Shadow Minister for Regional Health, Trade, Seniors	
	The Hon Sam Farraway, MLC Shadow Minister for Regional Transport and Roads	
	The Hon Ron Hoenig MP Minister	

Advocacy Group	Minister	Matter
	for Local Government	
OCC 3 November 2023	The Hon Rose Jackson MLC, Minister for Water	Suma Park Dam
Regional Australia Institute/OCC 16 November 2023	The Hon Tara Moriarty MLC Minister for Agriculture, Regional NSW and Western NSW	OCC Roundtable – regional resilience
CNSWJO 23 November 2023	The Hon Penny Sharp MLC Minister for Climate Change, Energy, Environment, Heritage	Requested the Minister to support the business case on the priority investments in the nexus between energy security and emissions reduction in Central NSW; extend the JONZA program to ensure embedment and implementation of activities that support the transition to net zero; support Council's to reduce their landfill emissions by providing funding and other support for emissions reduction activities.
	The Hon Chris Minns, Premier of NSW	Requested the Premier support the retaining of the CNSW boundary for both the Destination Network and Regional NSW; recognise the challenges for Councils in this region and receive views on empowering and enabling local communities in regional NSW.
	The Hon Daniel Mookhey, MLC Treasurer	Requested the Minister recognise and support a review of the use of Treasury Common Planning Assumptions; the sustainability challenge for local government in Central NSW; the potential for investment in Central NSW in support of the Business Case for the Nexus Between Net Zero and Energy Security; for the need for funding for water security projects to manage the risk of drought starting this coming summer.
	The Hon Stephen Kamper, Minister for Small Business, Lands and Property, Multiculturalism, Sport	Requested the Minister provide advice on skills shortages; insurance; cost of living and doing business pressure and the Planning Portal

Advocacy Group	Minister	Matter
	The Hon Rose Jackson MLC, Minister for Water, Housing, Homelessness, Mental Health, Youth,	Requested the Minister note the CNSWJO priority water infrastructure brochure and seek additional information on any of the projects included; work with CNSWJO region to represent the water grid projects to the National Water Grid; provide an update on the progress of the Belubula Water Security Project Final Business Case; help speed up the timeframes of DPE Water in enabling water security projects to progress notably stormwater harvesting for Bathurst and Orange
	The Hon Jenny Aitchison, Minister for Regional Transport and Roads	Requests of the Minister included: provide advice on new direction for transport planning; sign off on the development of an acceptable timeframe on a new transport plan; road corridor plans be re-instated by TfNSW; that the funding framework for roads affected by natural disasters be reviewed including betterment and simplification; cyclic guaranteed reliable funding for councils to implement proactive maintenance models should be considered.
Regional Cities NSW 29 November 2023	Delegation Meeting with The Hon Steve Whan MP, Minister for Skills, TAFE and Tertiary Education; The Hon Jenny Aitchison MP, Minister for Regional Transport and Roads; The Hon Ron Hoenig MP, Minister for Local Government; Dr Joe McGirr MP, Member for Wagga Wagga	Discussion on topics including: Population growth and population forecasting priorities; regional housing priorities; regional immigration priorities; regional skills and workplace hubs priorities; regional road and freight connectivity priorities and the development of the RCNSW Pinch Points Program; liveability, civic and community infrastructure priorities; and development of a memorandum of understanding between RCNSW and the State Government.
CNSWJO 17 February 2024	Correspondence to Mr Phil Donato MP Local Member for Orange	Requesting that the Minister for Water, the Hon Rose Jackson be approached to convene a Regional Water Security Roundtable in the region to include State and Federal Government representatives

Advocacy Group	Minister	Matter
Regional Cities NSW 8 May 2024	Delegation Meetings with Minister Tara Moriarty MLC Minister for Agriculture, Regional NSW and Western NSW; Minister Paul Scully MP Minister for Planning and Public Spaces; Minister Rose Jackson MLC, Minister for Housing and Homelessness; Minister Jenny Aitchison MP, Minister for Regional Transport and Roads; Minister Graham MLC	Discussion on topics including: Population growth occurring across Regional NSW; requesting an increase in the supply of social and affordable housing in regional areas; meeting skills challenges and supporting regional businesses; strategic roll-out of Workplace Hubs in regional cities; regional port connectivity; regional freight connectivity; local and regional roads and investment in such to meet future challenges of climate change; investment in liveability, civic and community facilities in regional cities; improvement of digital connectivity in regional NSW; water security for growing regional cities.
Community Cabinet Meeting 17 May 2024	Various Ministers	Councillors and senior staff had the opportunity to meet individually or as part of the Community Forum with various Cabinet Ministers discussing regional priorities.
CNSW JO 23 May 2024	The Hon Jenny Aitchison, Minister for Regional Transport and Roads	Enabling housing along the Mitchell Highway and the Great Western Highway; support for the Round Table on the Safe, Swift and Secure Link between Central NSW and Sydney being coordinated by Phil Donato, Member for Orange; funding for roads affected by natural disasters; and Transport Planning for the region in the context of the freight task for the Rewiring of NSW.
LGNSW Housing Roundtable 29 May 2024	The Hon Paul Scully MP, Minister for Planning and Public Spaces and the Minister for Housing and Homelessness and The Hon Rose Jackson MLC	Housing priorities and regional priorities.

It should be noted that the Central NSW Joint Organisation, of which Orange City Council is a member, has developed a full suite of Advocacy Plans including:

- Regional Prosperity Advocacy Plan
- Skills Shortages Advocacy Plan
- Health Advocacy Plan

• Transport Advocacy Plan
• Water Advocacy Plan
• Energy Advocacy Plan

These plans can be accessed by contacting the author of this report.

In addition to the above, the Mayor, Deputy Mayor, Councillor(s) and/or CEO or Council staff attended meetings or Board meetings during this period with the following key lobby groups:

- Regional Development Australia
- General Managers Advisory Committee (GMAC)
- Orange360
- Netwaste
- Association of Mining-related Councils
- Local Land Services
- Mayoral Taskforce for People Seeking Asylum

By Council resolution the following advocacy occurred during the period:

Meeting / Date	Agenda Item	Responsible Officer	Advocacy
SPC 5 December 2023	2.1 – Minutes of Orange Health Liaison Committee 7 November 2023	Orange Health Liaison Committee	Write to the Office for Health and Medical Research regarding better access to clinical trials for regional and rural patients.
PDC 5 September 2023	2.6 – Planning Proposal, 277 Cargo Road	Council Planning Team	Seek formal advice on an acceptable design of, and location of, an access intersection with Cargo Road.
CCL 21 November 2023	5.4 – Submission Invitation – Local Government Remuneration Tribunal	Council	That Council makes a submission to the Local Government Remuneration Tribunal on Councillors and Mayoral Remuneration seeking that the decision be taken out of the hands of Local Government.
PDC 7 November 2023	2.4 – Planning proposal to amend Orange LEP – 26 Lysterfield Road	Council Planning Team	That Council (1) direct staff to forward the matter to the Department of Planning and Environment for a Gateway Determination and that (2) staff shall request the Department of Planning and Environment to delegate the making of the plan to Council. *(3) and (4) refer to conditions being met and commence further consultations and public*

Meeting / Date	Agenda Item	Responsible Officer	Advocacy
			exhibition.
Council 19 September 2023	5.6 – 2023/1309 Financial Statements	Council	That Council (2) refers the General Purpose and Special Purpose financial statements to the Audit Office of NSW for audit. *(1) and (3) refer to authorising signatories on audit and auditor to present report to council.*
SPC 1 August 2023	Question taken on Notice	Council Technical Services Team	Update requested on the Lucknow speed limit reduction to 50km/hr. (Following resolution 23/236 on 20 June 2023 that OCC write to TfNSW requesting a review of Lucknow speed limit and consider reduction to 50km/hr through village.)
IPC 5 December 2023	Matter Arising	Council Technical Services Team	That Council write to Local Member seeking extension of membership be made to allow representative of service vehicle industries (taxi's, buses, trucks etc) to be included as members on the City of Orange Traffic Committee.
Council 20 February 2024	Notice of Motion	Council	That Council advocate for the supply and introduction of Life Vac devices in all NSW Schools/Childcare Centres by lobbying our Local and State members for funding of the Life Vac devices and to write to Prue Car, Deputy Premier, Minister for Education and Early Learning in support of this initiative.
ESPC 4 June 2024	2.1 – Minutes of Companion Animals Community Committee 7 March 2024	Council Development Services Team	That a letter be written on behalf of Council to the NSW Parliament lobbying for the change to desexing laws.
Council	Notice of Motion	Council	That Council first write to the Local Member seeking support in

Meeting / Date	Agenda Item	Responsible Officer	Advocacy
4 June 2024			the first instance then write to the State Government requesting if construction of the athletics track alone, without attached grandstand, could occur simultaneously with construction of the main sports stadium.

Separate to the above summary, the Mayor, Councillors, CEO and senior staff of Council have had opportunities to have discussions with key Government personnel at different functions, conferences and gatherings which will contributed to the progression of the Orange region's priorities.

5.4 POLICY COMMITTEES OF COUNCIL

TRIM REFERENCE: 2024/1013
AUTHOR: David Waddell, Chief Executive Officer

EXECUTIVE SUMMARY

It has been Council's practice to establish a number of Policy Committees, and to delegate authority to those Committees to determine a range of matters, with exception to matters that would cause expenditure outside Council's adopted Delivery/Operational Plan.

This report seeks Council's determination of the Policy Committee structure. This report also seeks Council's determination of those Policy Committee Chairpersons elected by Open Ballot (show of hands).

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "18.1. Provide representative, responsible and accountable community governance".

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

All Committees are subject to Council's Code of Meeting Practice. Following Council's determination of the Committee structure, Charters for the Policy Committees will be developed and presented to Council for adoption.

RECOMMENDATION

That Council resolves:

1 To approve the Policy Committee Structure as provided

2 To adopt each of the Policy Committee Charters

3 To Elect a Chairperson of each Policy Committee for the period November 2024 to September 2026

4 That the method of voting for the election of Policy Committee Chairperson(s) be Open Ballot (show of hands)

5 That the Chief Executive Officer, acting as Returning Officer, conduct the election for the Policy Committee Chairperson(s).

FURTHER CONSIDERATIONS

Consideration has been given the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Previous Policy Committee Structure

The Policy Committee structure under the previous Council was:

a Planning and Development Policy Committee

b Employment and Economic Development Policy Committee*

c Infrastructure Policy Committee

d Sport and Recreation Policy Committee*

e Environmental Sustainability Policy Committee

f Finance Policy Committee

g Services Policy Committee

**Proposed Name Changes below*

Council has previously discussed other possible structures for the Policy Committees including:

- Reducing the number to four to align with the Divisions of Council (Corporate and Commercial, Technical, Development and Community, Recreation and Cultural)
- Determining the number of Policy Committees based on key areas of interest to the community
- Combining Planning and Development with Employment and Economic Development Policy Committees

Proposed Policy Committee Structure

Staff have reviewed the structure and propose two name changes. This is to more accurately describe the committees and aligns with the fair distribution of business of community committees reporting to each and distribution across Directorates.

The Proposed Policy Committee structure is:

a PDC - Planning and Development Policy Committee

b ESPC - Environmental Sustainability Policy Committee

c FPC - Finance Policy Committee

d IPC - Infrastructure Policy Committee

e REDPC - Regional & Economic Development Policy Committee*

f RCPC - Recreation & Culture Policy Committee*

g SPC - Services Policy Committee

**Proposed Name Changes*

Council will be required to determine the Chairperson for each Policy Committee established at this meeting. An Expression of Interest will be provided to Councillors before the meeting to allow ease of nomination process, however nominations may still be made during this item at the Council Meeting.

Draft Policy Committee Charters are attached.

Election of Chairperson(s)

Council will need to resolve the method of voting. It is recommended that the method of voting be Open Ballot (show of hands) or Ordinary Ballot (as was adopted for the election of the Deputy Mayor).

The procedure to be followed for the conduct of the elections will be similar to the process adopted for the election of the Deputy Mayor, except for the requirement to provide nominations in writing.

Councillors may nominate for the position of Chairperson without notice at the meeting, and nominations do not need to be in writing. Any nomination by a Councillor will require another Councillor to 'second' the nomination. The Chief Executive Officer will call for nominations and conduct the election for Chairperson of one Policy Committee at a time.

A nomination form is attached for those Councillors wishing to complete prior to the meeting and can be placed in the Ballot Box in the Chief Executive Officer's office or the Council Chamber prior to the meeting.

Procedures for the election count, as set out in the Local Government (General) Regulation 2021 Schedule 7, are detailed below:

Election

(1) If only one Councillor is nominated, that Councillor is elected.

(2) If more than one Councillor is nominated, the Council is to resolve whether the election is to proceed by preferential ballot, by ordinary ballot or by open voting.

(3) The election is to be held at the Council Meeting at which the Council resolves on the method of voting.

(4) "ballot" has its normal meaning of secret ballot

"open voting" means voting by a show of hands or similar means.

Ordinary Ballot or Open Voting

Marking of Ballot Papers

5 (1) If the election proceeds by ordinary ballot, the Returning Officer is to decide the manner which votes are to be marked on the ballot-papers.

(2) The formality of a ballot-paper under this Part must be determined in accordance with clause 345 (1) (b) and (c) and (6) of this Regulation as if it were a ballot-paper referred to in that clause.

(3) An informal ballot-paper must be rejected at the count.

Count - 2 Candidates

6 (1) If there are only 2 candidates, the candidate with the higher number of votes is elected.

(2) If there are only 2 candidates and they are tied, the one elected is to be chosen by lot.

Count - 3 or more candidates

7 (1) If there are 3 or more candidates, the one with the lowest number of votes is to be excluded.

(2) If 3 or more candidates remain, a further vote is taken of those candidates and the one with the lowest number of votes from that further vote is to be excluded.

(3) If, after that, 3 or more candidates remain, the procedure set out in subclause (2) is to be repeated until only 2 candidates remain.

(4) A further vote is to be taken of the 2 remaining candidates.

(5) Clause 6 of this Schedule then applies to the determination of the election as if the 2 remaining candidates had been the only candidates.

(6) If at any stage during a count under subclause (1) or (2), 2 or more candidates are tied on the lowest number of votes, the one excluded is to be chosen by lot.

Preferential Ballot

Ballot-papers and Voting

9 (1) The ballot-papers are to contain the names of all the candidates. The Councillors are to mark their votes by placing the numbers '1', '2' and so on against the various names to indicate the order of their preference for all the candidates.

(2) The formality of a ballot-paper under this Part is to be determined in accordance with clause 345 (1) (b) and (c) and (5) of this Regulation as if it were a ballot-paper referred to in that clause.

(3) An informal ballot-paper must be rejected at the count.

Count

10 (1) If a candidate has an absolute majority of first preference votes, that candidate is elected.

(2) If not, the candidate with the lowest number of first preference votes is excluded and the votes on the unexhausted ballot-papers counted to him or her are transferred to the candidates with second preference on those ballot-papers.

(3) A candidate who then has an absolute majority of votes is elected, but, if no candidate then has an absolute majority of votes, the process of excluding the candidate who has the lowest number of votes and counting each of his or her unexhausted ballot-papers to the candidates remaining in the election next in order of the voter's preference is repeated until one candidate has received an absolute majority of votes. The latter is elected.

(4) In this clause, absolute majority, in relation to votes, means a number that is more than one-half of the number of unexhausted formal ballot-papers.

Choosing by Lot

11 To choose a candidate by lot, the names of candidates who have equal numbers of votes are written on similar slips of paper by the Returning Officer, the slips are folded

by the Returning Officer so as to prevent the names being seen, the slips are mixed and one is drawn at random by the Returning Officer and the candidate whose name is on the drawn slip is chosen.

ATTACHMENTS

1 DRAFT - PDC - Planning & Development Policy Committee Charter 2024, D24/124890⇩
2 DRAFT - ESPC - Environmental Sustainability Policy Committee Charter 2024, D24/124904⇩
3 DRAFT - FPC - Finance Policy Committee Charter 2024, D24/124935⇩
4 DRAFT - IPC - Infrastructure Policy Committee Charter 2024, D24/124903⇩
5 DRAFT - REDPC - Regional & Economic Development Policy Committee Charter 2024, D24/124922⇩
6 DRAFT - RCPC - Recreation & Culture Policy Committee Charter 2024, D24/124910⇩
7 DRAFT - SPC - Services Policy Committee Charter 2024, D24/124908⇩

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
PLANNING & DEVELOPMENT

D24/122903

Purpose
To determine Planning, Building and Health Policy Matters, including Land Use and Environmental Planning.

Membership
All Councillors.

Quorum
Seven Councillors.

Meeting Dates
First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation
To determine all matters referred to it for consideration as resolved by Council.

Election of the Chairperson
The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

DRAFT

Function of the Chairperson
- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports
Nil.

Responsible Directorate
Development Services

Meetings
- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Planning and Development Policy Committee shall be open to the press and public.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
PLANNING & DEVELOPMENT

D24/122903

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

DRAFT

Recording

- Formal minutes of meetings of the Planning and Development Policy Committee will be produced in accordance with Council's Code of Meeting Practice.
- In relation to each planning decision made by the Committee, a division will be called. The minutes of the meeting will show those Councillors that voted for the decision, and those Councillors that voted against the decision (in accordance with Section 375A of the Local Government Act 1993). A register of these voting results will be maintained and will be publicly available.

Site Inspections

- The Planning and Development Committee may conduct site inspections in relation to any matter brought before it for consideration.
- While inspections are not considered to be formal meetings of the Committee, inspections are to be facilitated by the Chairperson or, in their absence, the Mayor together with the Director Development Services.
- A quorum is not required for site inspections.
- No minutes will be kept of site inspections.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
ENVIRONMENTAL SUSTAINABILITY

D24/122997

Purpose

To determine policy matters relating to climate change and environmental sustainability, city presentation and promotion and companion animal compliance.

Membership

All Councillors.

Quorum

Seven Councillors.

Meeting Dates

First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation

To determine all matters referred to it for consideration as resolved by Council.

Election of the Chairperson

The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

DRAFT

Function of the Chairperson

- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports

- Companion Animal
- Environmental Sustainability
- Parks, Trees & Waterways
- Tidy Towns

Responsible Directorate

Development Services/Community Recreation & Cultural Services

Meetings

- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Environmental Sustainability Policy Committee shall be open to the press and public.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
ENVIRONMENTAL SUSTAINABILITY

D24/122997

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

Recording

Formal minutes of meetings of the Environmental Sustainability Policy Committee will be produced in accordance with Council's Code of Meeting Practice.

DRAFT

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
FINANCE

D24/122982

Purpose
To determine matters relating to prudent financial planning of Council including applications relating to Councils Event Sponsorship and Small Donations programs.

Membership
All Councillors.

Quorum
Seven Councillors.

Meeting Dates
First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation
To determine all matters referred to it for consideration as resolved by Council.

Election of the Chairperson
The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

DRAFT

Function of the Chairperson
- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports
Nil.

Responsible Directorate
Office of the Chief Executive Officer

Meetings
- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Finance Policy Committee shall be open to the press and public.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
FINANCE

D24/122982

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

Recording

Formal minutes of meetings of the Finance Policy Committee will be produced in accordance with Council's Code of Meeting Practice.

DRAFT

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
INFRASTRUCTURE

D24/122944

Purpose

To receive updates on Council's major infrastructure matters and determine matters relating to Council's Infrastructure, including matters of Council policy relating to:

- Roads, Water & Sewer
- Traffic and Transport
- Major Projects
- Emergency services
- Airport

Membership

All Councillors.

Quorum

Seven Councillors.

Meeting Dates

First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation

To determine all matters referred to it for consideration as resolved by Council.

DRAFT

Election of the Chairperson

The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

Function of the Chairperson

- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports

- City of Orange Traffic Committee
- Orange Airport
- Mayor Projects & Infrastructure
- Floodplain Risk Management

Responsible Directorate

Technical Services

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
INFRASTRUCTURE

D24/122944

Meetings

- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Infrastructure Policy Committee shall be open to the press and public.

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

DRAFT

Recording

Formal minutes of meetings of the Infrastructure Policy Committee will be produced in accordance with Council's Code of Meeting Practice.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
REGIONAL & ECONOMIC & DEVELOPMENT

D24/122909

Purpose
To determine matters relating to Regional & Economic Development including tourism and business attraction strategies and economic development initiatives for the city and surrounding towns.

Membership
All Councillors.

Quorum
Seven Councillors.

Meeting Dates
First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation
To determine all matters referred to it for consideration as resolved by Council.

Election of the Chairperson
The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

DRAFT

Function of the Chairperson
- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports
- Economic Development
- Australia Day
- Sister Cities
- Clifton Grove
- Lucknow
- Spring Hill

Responsible Directorate
Corporate & Commercial Services

Meetings
- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Regional & Economic Development Policy Committee shall be open to the press and public.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
REGIONAL & ECONOMIC & DEVELOPMENT

D24/122909

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

Recording

Formal minutes of meetings of the Regional & Economic Development Policy Committee will be produced in accordance with Council's Code of Meeting Practice.

DRAFT

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
RECREATION & CULTURE

D24/122996

Purpose
To determine policy matters relating to the planning & development of sport and outdoor recreation and cultural activities of the city.

Membership
All Councillors.

Quorum
Seven Councillors.

Meeting Dates
First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation
To determine all matters referred to it for consideration as resolved by Council.

Election of the Chairperson
The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

DRAFT

Function of the Chairperson
- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports
- NAIDOC Week
- Sport & Recreation
- Bicycle
- Heritage
- Showground

Responsible Directorate
Community, Recreation & Cultural Services

Meetings
- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Recreation and Culture Policy Committee shall be open to the press and public.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
RECREATION & CULTURE

D24/122996

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

Recording

Formal minutes of meetings of the Recreation & Culture Policy Committee will be produced in accordance with Council's Code of Meeting Practice.

DRAFT

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
SERVICES

D24/122972

Purpose
To determine matters relating to Council's community, social and cultural services and related policy.

Membership
All Councillors.

Quorum
Seven Councillors.

Meeting Dates
First Tuesday of each month, during the Council Term or as otherwise resolved by the Council.

Delegation
To determine all matters referred to it for consideration as resolved by Council.

Election of the Chairperson
The Chairperson is elected bi-annually by Council in November 2024 and September 2026, or as otherwise resolved by the Council.

In the event of an absence of the Chairperson, the Mayor shall Chair the meeting.

DRAFT

Function of the Chairperson
- It is the Chairperson's role to preside at meetings of the Committee and ensure the meeting is conducted in accordance with the Code of Meeting Practice.
- The Chairperson shall hold the casting vote in the end of equal for and against votes on an item.
- The Chairperson has no specific delegation of authority, other than those responsibilities imposed by Council's Code of Meeting Practice.

Community Committee Reports
- Ageing & Access
- Community Safety & Crime Prevention
- Family & Domestic Abuse
- Orange & Cabonne Road Safety
- Orange Health Liaison

Responsible Directorate
Community Recreation & Cultural Services

Meetings
- All operations of the Committee shall be in accordance with Council's adopted Code of Meeting Practice.
- Subject to the Local Government Act 1993 and Regulations, a meeting of the Services Policy Committee shall be open to the press and public.

ORANGE CITY COUNCIL

POLICY COMMITTEE CHARTER
SERVICES

D24/122972

Voting

- Each councillor is entitled to one (1) vote.
- The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.
- Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

Conflict of Interests

- A conflict of interest exists where a reasonable and informed person would perceive that a member could be influenced by a private interest when carrying out public duty.
- A pecuniary interest is an interest that a person has in a matter because of the reasonable likelihood or expectation of appreciable financial gain or loss to the person.
- A member of the Committee shall not at meetings vote in, or take part in the discussion of matters in which the member, or the member's partner or any relation of the member, has any pecuniary interest.
- In relation to non-pecuniary interests, members must manage this in one of two ways: remove the source of the conflict, or have no involvement in the matter.
- Refer to Council's Code of Conduct for more information.

Recording

Formal minutes of meetings of the Services Policy Committee will be produced in accordance with Council's Code of Meeting Practice.

DRAFT

5.5 COMMUNITY COMMITTEE FRAMEWORK AND COUNCILLOR COMMITTEE MEMBERSHIP

RECORD NUMBER: 2024/1460
AUTHOR: Jen Sharp, Director Corporate & Commercial Services

EXECUTIVE SUMMARY

This report seeks Council's determination of its Community Committee structure over the current term of Council. A recommended framework is provided for Council's consideration.

Orange City Council is also represented on a range of other external agencies and organisations, and these are also listed for determination by Council for the coming term.

This report provides draft Charters for the proposed Committees for information. Council will have the opportunity to adopt the final Charters once the expression of interest process for members is complete.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "18.1. Provide representative, responsible and accountable community governance".

FINANCIAL IMPLICATIONS

Nil

POLICY AND GOVERNANCE IMPLICATIONS

Under the Local Government (General) Regulation 2021, Council may establish those Committees it deems appropriate. Any such Committees established are governed by Council's adopted Code of Meeting Practice and Committee Members are required to comply with Council's Code of Meeting Practice and Code of Conduct.

Once the Community Committee framework is established by Council, expressions of interest will be sought from interested community members and appropriate agencies.

The results of this process, together with the final Charter for each Committee, will be presented to Council for adoption in the early February 2025, followed by Committee Member Induction and commencement of meetings.

Councillors will be provided with an expression of interest form for Chairperson or Member of Community Committees and Membership on external agencies. This will aid with efficient meeting processes to elect Councillors. There will also be an opportunity during the meeting to nominate for any committee.

RECOMMENDATION

1 **That this item be heard and voted on *in seriatim.***

2 **To establish the Community Committee framework for the 2024-2028 term of Council as outlined in the report.**

3 **To Elect a Chairperson and Councillor Members of each Community Committee for the period November 2024 to September 2026.**

4 **That the method of voting for the election of Policy Committee Chairpersons and Members be Open Ballot (show of hands) and the Chief Executive Officer, acting as Returning Officer, conduct the election for the Committee Chairpersons and Members.**

5 **That Council conduct an expressions of interest process with the community for members and relevant agencies/organisations to join a Community Committee, based on the draft Charter for each Committee.**

6 **That Council confirm representation on the following external bodies:**
   a **Orange Rail Action Group**
   b **Joint Regional Planning Panel**
   c **Business Orange (Orange Business Chamber)**
   d **TDO Limited**
   e **Civic Risk Mutual**
   f **Central NSW Joint Organisation (CNSWJO)**

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Councillor Commitments

There are 24 Community Committees proposed.

23 of those committees require Councillor Chairpersons (not Orange & Cabonne Road Safety) - this would equate to an average of 2 Committees per Councillor as Chairperson.

All Committees (except COTC) require an additional 2 Councillor members - this would equate to an average of 4 Committee memberships per Councillor (in addition to chair).

External Agencies – require at least 6 Councillors.

Community Committees

Council has a history of establishing Community Committees as a mechanism for two-way feedback with the community and relevant agencies. One of the initiatives introduced in more recent times was to ensure each Committee develops and receives update reports on an Action Plan. This allows the Committee to identify projects and tasks to be completed, and as these Action Plans are reported to Council, this information is used to inform Council's Delivery/Operational Plan. It is the responsibility of each committee to commit to and undertake to complete actions forming the Action Plan.

The following table provides a framework for Council's consideration.

Type	Determined Committee	Appointed Councillor Member
Internal	Audit Risk & Improvement (ARIC)	Cr F Kinghorne, Cr S Peterson
External	Mining & Energy Related Councils (MERC)	Cr K Duffy, Cr T Mileto (Mayor)(Alt)

	Community Committee	Minimum Councillor Members	Chairperson	Meeting Frequency	Meetings Last Term
Reports to Infrastructure Policy Committee – Technical Services					
1	City of Orange Traffic Committee (Statutory)	Chairperson + 1 Alternate	Councillor	Monthly	Tues 9.30am (+ via electronic email agendas & voting)
2	Orange Airport	Chairperson + 2	Councillor	As required	Wed 6.00pm
3	Major Projects & Infrastructure	Chairperson + 2	Councillor	Six monthly	*New
4	Floodplain Risk Management	Chairperson + 2	Councillor	As required	Wed 5.00pm
Reports to Environmental Sustainability Policy Committee – Development/Community Recreation & Cultural Services					
5	Companion Animals	Chairperson + 2	Councillor	Quarterly	Thurs 12.30pm
6	Environmental Sustainability	Chairperson + 2	Councillor	Quarterly	Fri 8.00am
7	Tidy Towns	Chairperson + 2	Councillor	As required	Wed 1.00pm
8	Parks, Trees & Waterways	Chairperson + 2	Councillor	Quarterly	Thurs 5.00pm
Reports to Services Policy Committee – Community, Recreation & Cultural Services					
9	Ageing & Access	Chairperson + 2	Councillor	Quarterly	Tue 10.30am
10	Family & Domestic Abuse	Chairperson + 2	Councillor	Quarterly	*New
11	Orange & Cabonne Road Safety	2 Councillors	Determined by	As required	Wed 10.30am

	Community Committee	Minimum Councillor Members	Chairperson	Meeting Frequency	Meetings Last Term
			Committee		
12	Community Safety & Crime Prevention	Chairperson + 2	Councillor	Quarterly	Mon 5.30pm
13	Orange Health Liaison	Chairperson + 2	Councillor	Quarterly	Tue 10.00am
Reports to Recreation & Culture Policy Committee – Community, Recreation & Cultural Services					
14	NAIDOC Week	Chairperson + 2	Councillor	Quarterly (more regular approaching NAIDOC week)	Thurs 1.00pm
15	Sport & Recreation	Chairperson + 2	Councillor	Six Monthly	Wed 5.30pm
16	Bicycle	Chairperson + 2	Councillor	Quarterly	Various 11.00am
17	Heritage	Chairperson + 2	Councillor	Quarterly	Mon 5.30pm
18	Showground	Chairperson + 2	Councillor	As required	Wed 5.30pm
Reports to Regional & Economic Development Policy Committee – Corporate & Commercial Services					
19	Australia Day	Chairperson + 2	Councillor	As required	Wed 5.30pm
20	Clifton Grove	Chairperson + 2	Councillor	Quarterly	Thurs 5.30pm
21	Economic Development	Chairperson + 2	Councillor	Quarterly	Wed 8.00am
22	Lucknow	Chairperson + 2	Councillor	Quarterly	Thurs 6.00pm
23	Spring Hill	Chairperson + 2	Councillor	Quarterly	Thurs 5.30pm
24	Sister Cities	Chairperson + 2	Councillor	Six monthly	Thurs 10.00am

Charters for Community Committees

For those Community Committees suggested, a Charter similar to the last Council term is attached. This will assist Council in identifying the purpose of the Committee and will be used in the expression of interest process for members.

Depending on the outcome of the expression of interest process (i.e. how many community members are attracted for each Committee), and feedback from Council, these Charters

may be amended, so a final version will be presented to Council for adoption following the expression of interest process.

EXTERNAL AGENCY APPOINTMENTS

External Agency	Information	Councillor Members
Orange Rail Action Group	The Orange Rail Action Group is a group which is seeking support from Council. Any interested Councillor is invited to join this Committee.	No Limit
Joint Regional Planning Panel	The Joint Regional Planning Panel (JRPP) is a function of the NSW Government, and provides independent, merit-based decision making on regionally significant development. The JRPP comprises five panellists, with three members selected by the State Government and two selected to represent Council.	2 Councillors
Association of Mining Related Councils	This group is a non-profit local government based group with the aim to represent councils in all aspects of mining, including extractive industries, gas exploration, quarries and minerals. There are some 22 Council members, including Cabonne and Blayney Councils. Meetings are generally quarterly, held in member areas around the state.	Appointed - Cr Duffy, Cr Mileto (Mayor) (Alt)
Business Orange (Orange Business Chamber)	This position is in addition to the 11 elected Executive Committee positions.	1 Councillor
TDO Limited (Orange360)	TDO Limited was established by the tourism industry to develop the governance model for Orange360.	3 Members - Chief Executive Officer, Mayor + 1 Councillor
Central NSW Joint Organisation (CNSWJO)	CENTROC is the Central West Region of Councils, covering 14 Local Government areas across the Central West region. The Board of CENTROC generally meets quarterly.	Mayor (+ 1 alternate)

ATTACHMENTS

1 2024 Community Committee Charters, D24/125130⇩

ORANGE CITY COUNCIL

Community Committees 2024 Charters

DRAFT

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NSW 2800 Australia

135 Byng Street, Orange
NSW 2800 Australia

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council@orange.nsw.gov.au
www.orange.nsw.gov.au

Community Committees Reporting to: Infrastructure Policy Committee

DRAFT
Technical Services

COMMUNITY COMMITTEE CHARTER

CITY OF ORANGE TRAFFIC

D24/120092

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

The City of Orange Traffic Community Committee has been established in accordance with the Delegation to Councils for the Regulation of Traffic by Transport for NSW (TfNSW).

The committee is to:

- Act in accordance with all requirements set out in legislation relating to the formation and operation of Local Traffic Committees in NSW, and
- comply with the provisions of Transport for NSW guidelines governing the function of this Committee.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

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Reports To

Infrastructure Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

The Local Traffic Committee is an advisory body only, having no decision-making powers. It is, primarily, a technical review committee that is required to advise Council on traffic related matters referred to it by Council.

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The City of Orange Traffic Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Up to two additional Councillor members
- One Representative of the NSW Police
- One Representative of Transport for NSW

D24/120092

- Member of the Legislative Assembly for the Seat of Orange (or nominee)
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
  - Director Technical Services (or nominee)
  - Director Development Services (or nominee)
  - Manager Engineering Services (Committee Clerk)
  - Divisional Administration Officer - Technical Services (Committee Support)

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, agendas & minutes.

Quorum

There is no specific quorum required to allow a Committee meeting to proceed, but any advice can only be returned to Council if the views of Transport for NSW and the NSW Police have been obtained. Where the quorum is not met at a meeting advice can be sought by email.

Meeting Frequency

Monthly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

DRAFT

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Orange City Council Code of Conduct
Community Committee Member Information Pack
Orange City Council Code of Meeting Practice
Transport for NSW – Delegation to Councils – Regulation of Traffic
Orange Community Strategic Plan
Delivery/Operational Plan
Roads Act 1993
Road Transport Act 2013

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

ORANGE AIRPORT

D24/120107

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council and make recommendations in relation new and existing initiatives and projects and planning in relation to the Orange Airport including:

- Safety
- Infrastructure
- Information and education

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Infrastructure Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Orange Airport Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) airport users/representative(s) with an aviation interest.

D24/120107

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, agendas & minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

As required, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack
Orange City Council Code of Conduct
Orange City Council Code of Meeting Practice
Orange Community Strategic Plan
Delivery/Operational Plan
Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

MAJOR PROJECTS & INFRASTRUCTURE

D24/125121

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives in meeting the needs of the community in association with Major Project and Infrastructure across the City.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

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Reports To

Infrastructure Policy Committee.

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Major Projects & Infrastructure Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/125121

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Minimum of half the community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Orange City Council Code of Conduct	Orange Community Strategic Plan
Community Committee Member Information Pack	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plans & Strategy

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

FLOODPLAIN RISK MANAGEMENT

D24/120099

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise council and make recommendations in relation to the development and implementation of Orange City Council's Floodplain Risk Management Plan.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

Reports To

Infrastructure Policy Committee.

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

DRAFT

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Floodplain Risk Management Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120099

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Department of Climate Change, Energy, the Environment & Water (non-voting member, advisory only)
- Local Land Services
- Business Orange
- State Emergency Service
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to two (2) community representative(s) including from other relevant government or community agencies

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, agendas & minutes.

Quorum

Minimum of half voting members and one Councillor.

Meeting Frequency

As required, with specific meeting dates and times to be determined by the Committee.

DRAFT

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack
Orange City Council Code of Conduct
Orange City Council Code of Meeting Practice
Orange Community Strategic Plan
Delivery/Operational Plan
Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

Community Committees Reporting to: Environmental Sustainability Policy Committee

DRAFT

Development Services/ Community, Recreation & Cultural Services

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

COMPANION ANIMALS

D24/120095

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To develop and drive independent community initiatives and to advise Council through recommendation on policy relating to the development and implementation of the Orange City Council Companion Animals Management, including:

- Dog parks and off leash areas
- Information and education
- Operation the Orange Pound
- Animal registration and microchipping

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Environmental Sustainability Policy Committee.

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Companion Animals Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120095

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) appropriately skills community representative(s) including from relevant government or community agencies with demonstrated experience or interest in companion animal management.

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, agendas & minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

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ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

ENVIRONMENTAL SUSTAINABILITY

D24/120098

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

The purpose of the Environmental Sustainability Community Committee is to:

- To assist Council to lead the community on environmental sustainability
- Provide a voice for the importance and priority of climate action
- To advocate for best practice in urban planning, water management, natural resource management, biodiversity, waste management and renewable energy
- To strive to help Orange retain its natural beauty as a liveable sustainable City
- Planning for waste and natural resources management services and associated learning programs
- Assist Council with educational strategies that promote responsible use and management of its natural resources

DRAFT

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

Reports To

Environmental Sustainability Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Environmental Sustainability Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120098

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, agendas & minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

TIDY TOWNS

D24/120119

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council through recommendation, on strategic policy relating to the management and development of project initiatives, including detailed project submissions, to promote Orange as a Tidy Town within the parameters of Clean Up Australia Day campaign and criteria.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Environmental Sustainability Policy Committee.

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Tidy Towns Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120119

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, agendas & minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

As required with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least two (2) weeks before the scheduled meeting.
An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

PARKS, TREES AND WATERWAYS

D24/120115

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council and make recommendations in relation to:

- Community planning for parks and open spaces, including Cook Park and Orange Botanic Gardens
- Community Planning for streetscapes
- Community planning for waterways and stormwater management programs and associated learning programs

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Environmental Sustainability Policy Committee.

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Parks, Trees and Waterways Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120115

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

Community Committees Reporting to: Services Policy Committee

DRAFT
Community, Recreation & Cultural Services

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

AGEING AND ACCESS

D24/120085

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives in meeting the needs of older people, people with disabilities and families with younger children in the Orange community.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Services Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Ageing and Access Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120085

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

FAMILY & DOMESTIC ABUSE

D24/120100

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide recommendations to Council and to be a point of collaboration between Council, service providers and the community to work together to educate and promote initiatives, projects and policies regarding family and domestic abuse in the community, including the '16 Days of Activism' campaign annually.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Services Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Family & Domestic Abuse Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/XXXX

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

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ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

ORANGE & CABONNE ROAD SAFETY

D24/120108

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council through recommendation, and support in the development and implementation of an Orange and Cabonne Road Safety Strategic Action Plan and other road safety matters as required.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

Reports To

Services Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

DRAFT

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Orange & Cabonne Road Safety Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – as elected by the Committee
- Two Councillors
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to Four (4) community representative(s)
- Representatives from relevant agencies as determined by the Committee.

D24/120108

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Two (2) community members and one Councillor.

Meeting Frequency

As required, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

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ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

COMMUNITY SAFETY & CRIME PREVENTION

D24/120094

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives to support community safety and crime prevention in Orange and its surrounds. Activities may include:

- Information provision and education
- Partnering with external stakeholders
- Encouraging increased reporting of criminal activity or conduct (e.g. graffiti and vandalism)

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Services Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Community Safety & Crime Prevention Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120094

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- One Representative of the Central West Police District
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members, one representative of the Central West Police District and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

DRAFT

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

ORANGE HEALTH LIAISON

D24/120109

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide an interface between Council, health providers and education providers to the health industry to discuss and work together to address local health issues.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

Reports To

Services Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

DRAFT

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Orange Health Liaison Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120109

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

Community Committees Reporting to: Recreation & Culture Policy Committee

DRAFT
Community, Recreation & Cultural Services

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

NAIDOC WEEK

D24/120105

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council and make recommendations in relation to the planning, resourcing, management and conduct of National Aborigines and Torres Strait Islanders Celebration week and other significant occasions throughout the year in Orange.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Recreation & Culture Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The NAIDOC Week Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120105

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly and as required with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

SPORT & RECREATION

D24/120117

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council and make recommendations in relation to the development and implementation of strategies relating to sport and recreation including the Orange Outdoors Strategy and Orange Active Travel Plan. To drive independent committee initiatives in meeting the recreational needs of the Orange community.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Recreation & Culture Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Sport & Recreation Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120117

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Six Monthly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

COMMUNITY COMMITTEE CHARTER

BICYCLE

D24/120090

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives regarding bicycling in the Orange community.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Recreation & Culture

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Bicycle Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/XXXX

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

HERITAGE

D24/120102

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council through recommendation, on policy relating to the development and conduct of heritage programs, education, exhibitions, conservation and promotion throughout the Orange area. Aspects may include:

- natural resources
- local Aboriginal heritage
- cultural landscapes
- places that have aesthetic, historic, scientific or social value
- movable cultural heritage

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Recreation & Culture Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Heritage Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120102

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack
Orange City Council Code of Conduct
Orange City Council Code of Meeting Practice
Orange Community Strategic Plan
Delivery/Operational Plan
Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

SHOWGROUND

D24/120087

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives relating to the Orange Showground.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

Reports To

Recreation & Culture Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

DRAFT

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Showground Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Up to four (4) representatives from the Orange Show Society
- Up to four (4) representatives from the Orange Showground Users Group
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer

D24/120087

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

As required, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

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Community Committees Reporting to: Regional & Economic Development Policy Committee

DRAFT
Corporate & Commercial Services

COMMUNITY COMMITTEE CHARTER

AUSTRALIA DAY

D24/120088

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and to develop and drive the co-ordination and management of Australia Day commemorative activities to recognise and celebrate the community of Orange and surrounds, and its residents.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Regional & Economic Development Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Australia Day Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120088

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

As required, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

COMMUNITY COMMITTEE CHARTER

CLIFTON GROVE

D24/120093

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council and make recommendations in relation to Clifton Grove, including such items as infrastructure and facilities development, community engagement and sustainability, and to develop and drive independent committee initiatives in meeting the needs of the Clifton Grove community.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Regional & Economic Development Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Clifton Grove Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120093

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

Formal minutes of meetings of the Committee will be produced in accordance with Council's Code of Meeting Practice and will be produced by nominated staff members via InfoCouncil – Council's dedicated software program for the production of local council business papers.

DRAFT

Vacancies

Vacancies may arise during the term of the Committee. If a vacancy does occur, the Committee may invite an individual to join the Committee, or seek expressions of interest to fill the vacancy.

Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
Orange City Council Code of Meeting Practice	Asset Management Plan Strategy and Plans

Copies of these and other documents are available on Council's website at www.orange.nsw.gov.au, from the Committee Clerk or the Council's Governance team.

COMMUNITY COMMITTEE CHARTER

ECONOMIC DEVELOPMENT

D24/120097

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council through recommendation, on the implementation of the economic development strategies contained within Council's delivery and operational plans, including initiatives, policies, projects and planning related to the Economic Development of the city.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Regional & Economic Development Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Economic Development Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- One (1) Community member who is involved in Property Development/Sales

D24/120097

Membership and Roles cont.

- One (1) Community Representative from each economic cluster group being:
  - Health
  - Tourism
  - Education
  - Manufacturing/Engineering
  - Agribusiness
  - Mining
- One (1) Community Representative from relevant government or community agencies being:
  - Federal Member for Calare (not included in Quorum)
  - State Member for Orange (not included in Quorum)
  - Business Orange
  - BizHQ
  - NSW Department of Industry (or equivalent)

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

DRAFT

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

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Vacancies

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ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

LUCKNOW

D24/120104

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives in meeting the needs of the Village of Lucknow community.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Regional & Economic Development Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Lucknow Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120104

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

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ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

SPRING HILL

D24/120118

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To provide advice to Council and make recommendations in relation to new and existing projects, policies and planning, and develop and drive independent committee initiatives in meeting the needs of the Village of Spring Hill community.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

DRAFT

Reports To

Regional & Economic Development Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Spring Hill Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

D24/120118

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Quarterly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

An agenda will be distributed electronically to members at least one (1) week before a scheduled meeting.

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Vacancies

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Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
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ORANGE CITY COUNCIL

COMMUNITY COMMITTEE CHARTER

SISTER CITIES

D24/120116

Community Committees play a vital role in helping Council to make informed decisions about the actions taken. The program is a key driver in Council's community engagement *'collaborate'* value, linking **to item 15.3 - provide opportunities for widespread and quality engagement, and where appropriate, shared decision making** of the Community Strategic Plan.

Purpose

To advise Council through recommendation, on policy relating to the promotion of relationships with Council's four Sister Cities of:

- Orange, California
- Timaru, New Zealand
- Mt Hagen, Papua New Guinea
- Ushiku, Japan

Council also has a Co-operation Agreement based on an education program, tourism and cultural activities with the city of Valparaiso, Chile and will continue to work with the community to establish a friendship city in Ukraine.

To strengthen engagement between Council and community as identified in Council's Community Strategic and Engagement Plans, and to support a consultative and collaborative approach in the decision-making processes that impact the City of Orange, its people and surrounds.

DRAFT

The Committee does not have a role in the operational function of Council, and any recommendations made may be adopted, amended or declined. Operational Activities are the responsibility of the Chief Executive Officer and staff. Equally, where Council has adopted a Strategic Policy or Strategic Planning document, the Committee must observe the Council position as set out in that policy, plan or document.

Reports To

Regional & Economic Development Policy Committee

Policy Committee are Council sub-committees designed to support increased engagement and ownership of Councillors in areas of interest and expertise, and to improve the decision making processes.

Responsibilities

To be aware of the needs of the community and ensure that this knowledge is reflected in its activities and recommendations to Council.

To develop and maintain a Community Committee Action Plan that is informed by the knowledge of members and the strategic priorities of Council to support recommendations made and activities undertaken.

The committee and its members must conduct themselves and their business in accordance with Orange City Council's Code of Conduct, Code of Meeting Practice and any procedures relating to Community Committees as approved by the Council.

Term

The Sister Cities Community Committee shall dissolve at the General Election of Orange City Council. Council may dissolve the Committee at any time by resolution of Council.

D24/120116

Membership and Roles

- Chairperson – an elected Councillor
- Three Councillors including the Chairperson
- Committee Clerk (non-voting) – as nominated by the Chief Executive Officer
- Council staff (non-voting) – as nominated by the Chief Executive Officer
- Up to ten (10) community representative(s) including from relevant government or community agencies

Committee Clerk & Staff Members

The Chief Executive Officer will provide a Committee Clerk who is a sufficiently skilled Manager or Director who will be the representative of the Chief Executive Officer, and will exercise the functions of the Chief Executive Officer so far as they are relevant to the Committee and its Chairperson. The Committee Clerk will be responsible for the management of Committee correspondence, meetings, Agendas & Minutes.

Quorum

Majority of community members and one Councillor.

Meeting Frequency

Six Monthly, with specific meeting dates and times to be determined by the Committee.

Voting

All members have one vote only, including the Chairperson. In circumstances of an equality of votes, the matter is to be referred to Council (via the Policy Committee) for determination.

Reports and Recording

Matters to be considered by the Committee must be included in the agenda for the meeting, and must be provided in writing to the Committee Clerk at least ten (10) business days before the scheduled meeting.

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DRAFT

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Relevant Policies and Documents

Community Committee Member Information Pack	Orange Community Strategic Plan
Orange City Council Code of Conduct	Delivery/Operational Plan
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5.6 AMENDMENT TO PLANNING PROPOSAL - 277 CARGO ROAD

RECORD NUMBER: 2024/1582
AUTHOR: Alison Weir, Senior Strategic Planner

EXECUTIVE SUMMARY

Council considered a Planning Proposal to amend the Orange Local Environmental Plan 2011 in relation to land at 277 Cargo Road (Lot A DP 408148) on 5 September 2023 to the Planning and Development Committee. The Planning Proposal applies to land known as "Stage 1" of the Witton Place Candidate Area. The Witton Place Candidate Area is one of several greenfield precincts identified by the Orange Local Housing Strategy (adopted 7 June 2022) as being suitable for investigation for rezoning and associated residential development. Under the Orange Local Housing Strategy, the Witton Place Candidate Area is identified as a critical site for meeting the City of Orange's long term housing needs. The proposal is subject to an existing Gateway Determination issued by the NSW Department of Planning, Housing, and Infrastructure (DPHI) issued on 1 August 2024.



Figure 1 - Witton Place Candidate Area and Stage 1

Council staff in consultation with the proponent have since proceeded to amend the concept plan submitted with the original proposal to consider a site-specific Structure Plan for the whole of the Witton Place Candidate Area to further diversify the land use zone and lots sizes reflective of site conditions and more closely align with the housing priorities of the Orange Local Housing Strategy (OLHS).

To enable this the Planning Proposal has been amended. This includes amendments to:

- Remove changes to the "Drinking Water Catchment" status of the land as previously proposed (in response to matters raised in consultation with Cabonne Council and in DPHI's Gateway Determination).
- Amend existing mix of Zone RU1 Primary Production and Zone C3 Environmental Management to include an urban residential zones, R1 General Residential and R2 Low Density Residential. Remove the originally proposed RE1 Public Recreation zoned land, as the associated Planning Agreement ensures the provision of open space in accordance with the Structure Plan.
- Amend existing lot size of 100ha to 1,500m^2 for lots corresponding to the R2 Low Density Residential zone, and remove the Minimum Lot Size for R1 General Residential Zone;
- Add URA overlay to the site to trigger the requirements of Part 6 of the Orange Local Environmental Plan (LEP) in relation to a site specific Development Control Plan and for the purpose of mapping the site as a Bush Fire Planning - Urban Release Area;
- Remove biodiversity overlay over the pine trees in the centre of the site (and overlapping into adjacent site).
- Add a buffer area to the site to exclude the R1 General Residential zoned land from the Complying Development provisions to ensure development is consistent with the desired future character for the site. This is subject to negotiations with the Code SEPP team (NSW Government), as there are various mechanisms for excluding sites from Complying Development.

The amended Planning Proposal is supported by a Draft Planning Agreement that applies to Lot A in Deposited Plan 408148 and known as 277 Cargo Road, Orange, NSW, for the purposes of amending the Orange Local Environmental Plan. The draft agreement requires the dedication, embellishment and maintenance of any open space delivered under the amendment to Council. Councils' legal advisors have broadly endorsed the agreement, however, have noted concerns in relation to the lack of detail around the timing of dedication and the embellishment works required under the Planning Agreement.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "8.1. Plan for growth and development that balances liveability with valuing the local environment".

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

Nil.

RECOMMENDATION

That Council resolves:

1. **To refer the amended Planning Proposal to the Department of Planning, Housing and Infrastructure for a Gateway Alteration, and**
2. **That Upon receipt of Gateway Alteration proceed to address any conditions and undertake formal agency consultation and public exhibition, and**
3. **To place the Draft Planning Agreement on public exhibition with the amended Planning Proposal.**
4. **That Council authorise staff to negotiate any alternative planning mechanisms to achieve Complying Development exemption with the Code SEPP team.**

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

BACKGROUND

At its meeting of 5 September 2023, Council's Planning and Development Committee. Subsequent to Council considering the Planning Proposal on 5 September 2023 at the Planning and Development Committee, a Gateway Determination supporting the progress of the proposal was subsequently issued by DPHI on 1 August 2024.

In its Gateway Determination DPHI raised, among other things, the need to consult with Cabonne Council regarding the proposed removal of the Stage 1 site from the OLEP 2011's Drinking Water Catchment Map due to the land's location within the Molong Dam catchment. Council's consultation with Cabonne Council has confirmed its opposition to any change in the Drinking Water Catchment status of the land. The change in status is also considered to be inconsistent with Orange City Council's general approach to development control for land located within drinking water catchments. In order to ensure the Planning Proposal clearly aligns with Council's preferred approach to the management of drinking water catchment assets, and to avoid unnecessary confusion regarding this, it is considered desirable to remove this aspect of the proposal prior to public exhibition.

In addition, Council staff have undertaken more detailed urban design analysis and concept planning for the Candidate Area to ensure the proposal more satisfactorily meets the requirements of the Orange Local Housing Strategy. An Urban Design Study and preliminary concept plan support the amended Planning Proposal as Appendix A.

This process has, among other things, identified strategic opportunities for greater housing diversity and better neighbourhood planning within the Stage 1 site that will enable development to better align with the housing priorities of the Orange Local Housing Strategy. In this regard, the revised proposal seeks to vary the original proposal by applying a combination of R2 Low Density Residential and R1 General Residential zones in order to facilitate a limited mix of smaller lot housing types located in proximity to proposed new public open space.

This is to be supported by amendments to the street, open space and block arrangements shown in the previously submitted concept layout plan in order to foster a more permeable street and green space grid that is significantly more supportive of a sustainable, walkable neighbourhood form for the candidate area as a whole.

This revised Planning Proposal seeks to amend the previously submitted proposal by:

1. Removing changes to the "Drinking Water Catchment" status of the land as previously proposed (in response to matters raised in consultation with Cabonne Council and in DPHI's Gateway Determination - Condition 2).
2. Further diversifying the land use zoning and minimum lot sizes proposed to better reflect site conditions and more closely align with the housing priorities of the Orange Local Housing Strategy, in particular Housing Priority 2 ('Increase housing supply and diversity to meet the population's needs'), Housing Priority 4 ('Support the supply of affordable housing) and Housing Priority 5 ('Facilitate and guide housing design, creativity and innovation').
3. Ensuring the proposal and its supporting technical material better reflects the Orange Local Housing Strategy's requirement for candidate areas to be subject to comprehensive urban design analysis and associated concept planning prior to rezoning.
4. Responding to housing and neighbourhood design opportunities resulting from more detailed urban design analysis and concept planning undertaken the Candidate Area as a whole (Appendix A), including the identification of strategic opportunities for improved housing diversity and better place making within the Stage 1 site.
5. In combination with the above, refining the proposed quantity and layout of RE1 zoned land proposed within the Stage 1 site to reflect a more holistic and strategic approach to the prioritisation of public open space investment within the Witton Place Candidate Area as a whole. This includes the removal of the RE1 Public Recreation land, and the dedication of open space as per the Structure Plan through a Planning Agreement.

The revised Planning Proposal has been prepared by Orange City Council in consultation with the developer, Landorange Partnership.

Site Context

The Witton Place Candidate Area is located on the western edge of Orange's urban area and is a key visual element defining the western entrance to the city along Cargo Road. The site is located adjacent the southern-most portion ("Area 4") of the Ploughman's Valley residential area and approximately 3 kilometres west of the Orange Central Business District (CBD).

The candidate area is bounded by Cargo Road to the north, the Sydney to Broken Hill railway line to the south and Neals Lane to the west. The Planning Proposal applies to land known as "Stage 1" of the Witton Place Candidate Area, the north-eastern most lot of the Candidate Area.



Figure 2 - site context (Witton Place Candidate Area)

Objective and Intended Outcomes

To amend the Orange Local Environmental Plan 2011 to provide for greenfield development at 277 Cargo Road to accommodate a diverse range of housing consistent with the Orange Local Housing Strategy. The amended proposal seeks to:

- To contribute to the protection of local water catchments and environmental assets.
- Contribute to housing Orange's growing community and improve housing affordability through the provision of a diverse range of lots and housing typologies.
- To maintain the scenic values of the site through well located open space corridors and larger lots that contribute to the rural entry into the City.

Explanation of provisions

The amended Planning Proposal for Stage 1 of the site, known as 277 Cargo Road (Lot A DP 408148) seeks to amend the Orange Local Environmental Plan 2011 to change the land use zoning, minimum lot size, add an Urban Release Area overlay and biodiversity sensitivity mapping. The amended Planning Proposal seeks to:

- Rezone part RU1 Primary Production and C3 Environmental Management to R1 General Residential and R2 Low Density Residential in accordance with the Structure Plan for the Witton Place Candidate Area.
- Amend the Minimum Lot Size from 100 hectares to 1500 square meters corresponding with the R2 Low Density Residential zone and remove the Minimum Lot Size from the remainder of the site.
- Add the Urban Release Area overlay to the site to ensure a Development Control Plan is prepared before any Development Applications can be made on the subject land, and for the purpose of streamlining the assessment of Bush Fire Prone Land, consistent with the previous proposal considered by Council.

- Remove the mapped area from the biodiversity sensitivity mapping, consistent with the previous proposal considered by Council.
- Add a buffer area to the site to exclude the R1 General Residential zoned land from the Complying Development provisions to ensure development is consistent with the desired future character for the site. This will exclude the site from allowing Complying Development to occur, given its high value scenic qualities (as the entry into the City) and location within the Molong Dam drinking water catchment. This also ensures that high quality-built form outcomes will arise consistent with the intent of the Structure Plan and site specific Development Control Plan given the unique design aspects of the site and the presentation of built form to the open space corridors. This will ensure any Development Applications lodged for the site comply with the site specific Development Control Plan controls in relation to the abovementioned considerations. The intent of the clause would be consistent with Clause 7.15 Development in Shiralee Hilltop Park Buffer Area of the Orange Local Environmental Plan 2011. This is subject to negotiations with the Code SEPP team, as there are various mechanisms for excluding sites from Complying Development.

Strategic Merit

Central West and Orana Regional Plan 2041

Planning for the wider Central West and Orana region is undertaken in accordance with the *Central West and Orana Regional Plan 2041* ("CW&ORP 2041"). This sets out the NSW Government's long term (20-year) growth vision and land use planning priorities for the region, and is based on a projected growth in the regional population from 295,319 in 2024 to 324,943 in 2041 (NSW Population Projections, 2022). The amended proposal demonstrates consistency with the key objectives and strategies outlined in the Regional Plan, as summarised:

- Creating connected and healthy communities, by linking into existing infrastructure.
- Planning for resilient communities, through the design of the public domain by providing green infrastructure.
- Securing resilient region water resources, by minimising impact on water catchments through careful site design.
- Ensuring the site design is responsive to the scenic landscape and protects important views into and from the site.
- Providing well located housing that responds to future demand and population needs.
- Providing diverse housing that improves the provision of housing affordability.

Orange, Blayney and Cabonne Regional Economic Development Strategy—2023 Update

At the sub-regional scale, Orange forms the principal urban centre and LGA within the Orange, Blayney and Cabonne Functional Economic Region (FER). Council's role in supporting the economic development of the FER is governed by the Orange, Blayney and Cabonne Regional Economic Development Strategy - 2023 Update, which establishes the NSW Government's strategic economic development priorities for the region. These recognise the economic importance of well-located housing supported by good place design.

Local Strategic Planning Statement

The Orange Local Strategic Planning Statement (LSPS) provides a 20-year vision for land use planning in the Orange Local Government Area and outlines how growth and change will be managed. The amended proposal demonstrates consistency with the Planning Priorities, as outlined:

- Supporting the delivery of new homes in residential release areas,
- Providing a range of public domain spaces that foster a culturally rich and connected community,
- Provides for diverse housing choices and opportunities to meet the projected demographic needs of the community.

Orange Local Housing Strategy

The Planning Proposal has resulted from the identification of the subject site within the Orange Local Housing Strategy (July 2022). The OLHS identifies that 86% of housing stock in the Orange Local Government Area is single freestanding dwellings. Households made up of either couples with no children or lone person households are expected to increase from 53% (2016) to 59% (2041). The number of households with children is expected to decrease from 41% (2016) to 37% (2041). This demonstrated an increase demand for the delivery of smaller dwellings and a greater need for housing diversity within the City. Housing diversity is also a critical component in influencing housing affordability.

The Orange Local Government Area has limited greenfield land that is viable in supporting the growth of the City, and the sustainable use of greenfield land continues to be one of the key challenges faced by Council.

The site forms a portion of the Witton Candidate Area identified in the Orange Local Housing Strategy (OLHS) (July 2022). The OLHS identified the Candidate Area with a potential yield of 8/ha equating to 280 lots within low density, rural residential zones. The yield identified in the strategy was estimated based on high-level constraints analysis across all Candidate Areas within the Local Government Area and provides a basis for ongoing infrastructure planning. These estimates need to be tested against site specific constraints and opportunities to determine the highest and best use of the land. The projected yield resulting from the Structure Plan layout across the whole Candidate Area may not vary significantly from the overall yield identified in the OHLS due to larger lot required to maintain the entry into the city and as buffers from the railway line.

Section 9.1 Local Planning Directions

The amended proposal has resulted in no changes to the commentary provided in the report to the Planning and Development Committee on 5 September 2023.

State Environmental Planning Policies

The amended proposal has resulted in no changes to the commentary provided in the report to the Planning and Development Committee on 5 September 2023.

Site-Specific Merit

Witton Place Structure Plan

Consistent with Council's approach to the OLHS Candidate Areas and in accordance with the requirements of Section 8.8 of the OLHS Council staff prepared an Urban Design Study to guide any future Planning Proposals for the Candidate Area. Through this process and further analysis, it was determined that the site could cater for an increase in density to provide for greater diversity of lots sizes and varied housing typologies that better align with the anticipated household compositions and, to ensure the sustainable and efficient use of land.

The Structure Plan responds to the key features of the sites in ensuring that density is well located to not impact on any key views into the site, that density is located on amenity, and that open space protects and enhances the key natural features of the site.

Draft Planning Agreement

The draft Planning Agreement is to be made pursuant to *Section 7.4* of the *Environmental Planning and Assessment Act, 1979* with Charms Developments Pty Limited and the owner of 277 Cargo Road. The draft Planning Agreement that applies to Lot A in Deposited Plan 408148 and known as 277 Cargo Road, Orange, NSW, for the purposes of amending the Orange Local Environmental Plan. The draft agreement requires the:

- dedication of part of the Land proposed for a public park (Open Space Land);
- carrying out of embellishment works to the Open Space Land prior to dedication; and,
- the maintenance of the Open Space Land for a period of two years.

Council's legal advisors have broadly endorsed the Planning Agreement, however, have raise concerns regarding Council's ability to further leverage, should it be needed, if in the event the land is transferred to another owner/developer. The concerns relate to:

- the timing and dedication of the open space to Council which currently aligns with the registration of the subdivision. Council could further negotiate the conditions of the dedication of the open space land to Council is at the registration of the open space parcel and a nominal number of lots (for example 10 lots) to limit Council's liability.
- the limited detail regarding the embellishment of open space. Council staff have requested the Planning Agreement be broad in this regard as the exact layout and size of the open space parcel is to be determined through further detailed design. It is to be noted though that this approach does pose a risk to Council in being able to negotiate the embellishment outcomes.

The risk of the above has been determined as minor, and Council's legal advisers have indicated broad support of the Planning Agreement, advising Council staff of the above limitations.

Should the draft Planning Agreement be supported by Council, the draft will be placed on exhibition for a period of 28 days concurrently with the Planning Proposal.

Development Control Plan

Council staff are currently preparing a Site-Specific Development Control Plan (DCP) for 277 Cargo Road which will be placed on exhibition, at a later date, with the intention of adopting the DCP concurrently with the gazettal of OLEP 2011, subject to public consultation.

ATTACHMENTS

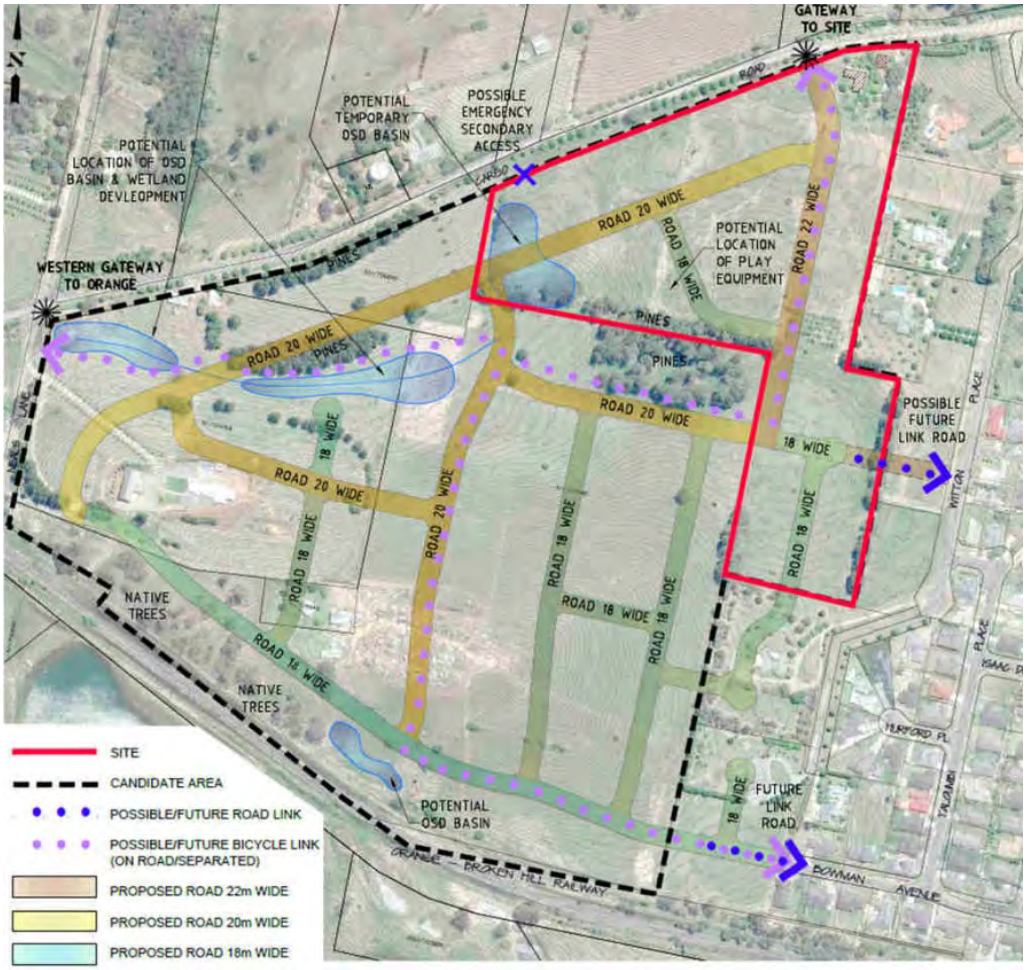
1 PDC 5 September 2023 - Planning Proposal - 277 Cargo Road, D24/122428⇩
2 Gateway Determination - Planning Proposal (redacted) 277 Cargo Road, D24/125295⇩
3 Planning Proposal - 277 Cargo Road Orange, D24/122415⇩
4 Appendix A - Witton Place Candidate Area - Urban Design Study - Version 1 - FINAL - 7 November 2024, D24/124470⇩
5 Appendix B - Water and Sewer Strategy - 277 Cargo Road, D24/122422⇩
6 Water and Sewer Strategy Addendum (redacted) - 277 Cargo Road, D24/125314⇩
7 Appendix C - Strategic Bush Fire Study - 277 Cargo Road, D24/122421⇩
8 Appendix D - Transport Assessment (redacted) - 277 Cargo Road, D24/125318⇩
9 Transport Assessment Addendum (redacted) - 277 Cargo Road, D24/125323⇩
10 Appendix E - Preliminary Flora and Fauna Assessment - 277 Cargo Road, D24/122419⇩
11 Appendix F - Preliminary Contamination Assessment (redacted) - 277 Cargo Road, D24/125493⇩
12 Appendix G - Traffic Noise Assessment - 277 Cargo Road, D24/122417⇩
13 Appendix H - Draft Intersection Design - 277 Cargo Road, D24/122416⇩
14 Planning Agreement - Draft Version for Council - 277 Cargo Road, D24/124370⇩

2.6 PLANNING PROPOSAL - 277 CARGO ROAD

RECORD NUMBER: 2023/1410
AUTHOR: Craig Mortell, Senior Planner

EXECUTIVE SUMMARY

Council is in receipt of a Planning Proposal to amend the Orange Local Environmental Plan 2011 in relation to land at 277 Cargo Road (Lot A DP 408148). The subject land forms part of the Witton Place Candidate Area identified under the Orange Local Environmental Plan 2011 which foreshadows the site being rezoned for residential development.



The proposal indicates up to 72 residential lots, and 1 open space lot within the subject land and an estimated additional yield of ~150 lots over the balance of the candidate area. The residential lots within the subject site comprise a mix of sizes from 850m^2 through to 2,000m^2.

To enable this the proposal four changes to the LEP will be required to facilitate future residential development. This includes amendments to the Land Zoning Map, the Minimum Lot Size Map, the Drinking Water Catchment Map and the Biodiversity Sensitivity Map.

The site has frontage to the classified road of Cargo Road and will seek a single access connection. Council recently discussed the NDR corridor and a range of sites under the housing strategy with Transport for NSW. Access arrangements for the Witton Place Candidate Area were discussed and while the need for an access point was acknowledged the final design and placement of the access needs to be confirmed.

The site is also located at the upper reaches of the Molong water catchment and as such consultation with Cabonne Shire Council is anticipated. Appropriate stormwater retention and management is expected to protect water quality in this regard.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "8.1. Plan for growth and development that balances liveability with valuing the local environment".

FINANCIAL IMPLICATIONS

Nil

POLICY AND GOVERNANCE IMPLICATIONS

Nil

RECOMMENDATION

1 That Council resolve to refer the Planning Proposal to Transport for NSW:
   a. for formal advice on an acceptable design of, and location of, an access intersection with Cargo Road, and
   b. subject to receiving advice from Transport for NSW on the Cargo Road access requirements, such requirements be reviewed by Technical Services and incorporated into the Planning Proposal, and
2 That the Planning Proposal be amended to include identifying the site as an Urban Release Area, to ensure that the DCP requirements of the local housing strategy are appropriately addressed, and
3 The concept layout supporting the Planning Proposal be amended to clarify and confirm the need for a connections for an eastern connection through to Witton Place, and
4 The proposed zoning map in the Planning Proposal be amended so that the proposed "park" lot be shown as RE1 Public Recreation, the area involved matching the blank lot shown on the proposed Minimum Lot Size map, and
5 That Council authorises the Chief Executive Officer (CEO) to negotiate a planning agreement in relation to the embellishment and dedication of the proposed open space lot.
6 The Planning Proposal, inclusive of the above changes, be referred to the Department of Planning and Environment for a Gateway Determination, and
   a. Upon receipt of a Gateway Determination staff proceed to address any conditions and undertake formal agency consultation and public exhibition.

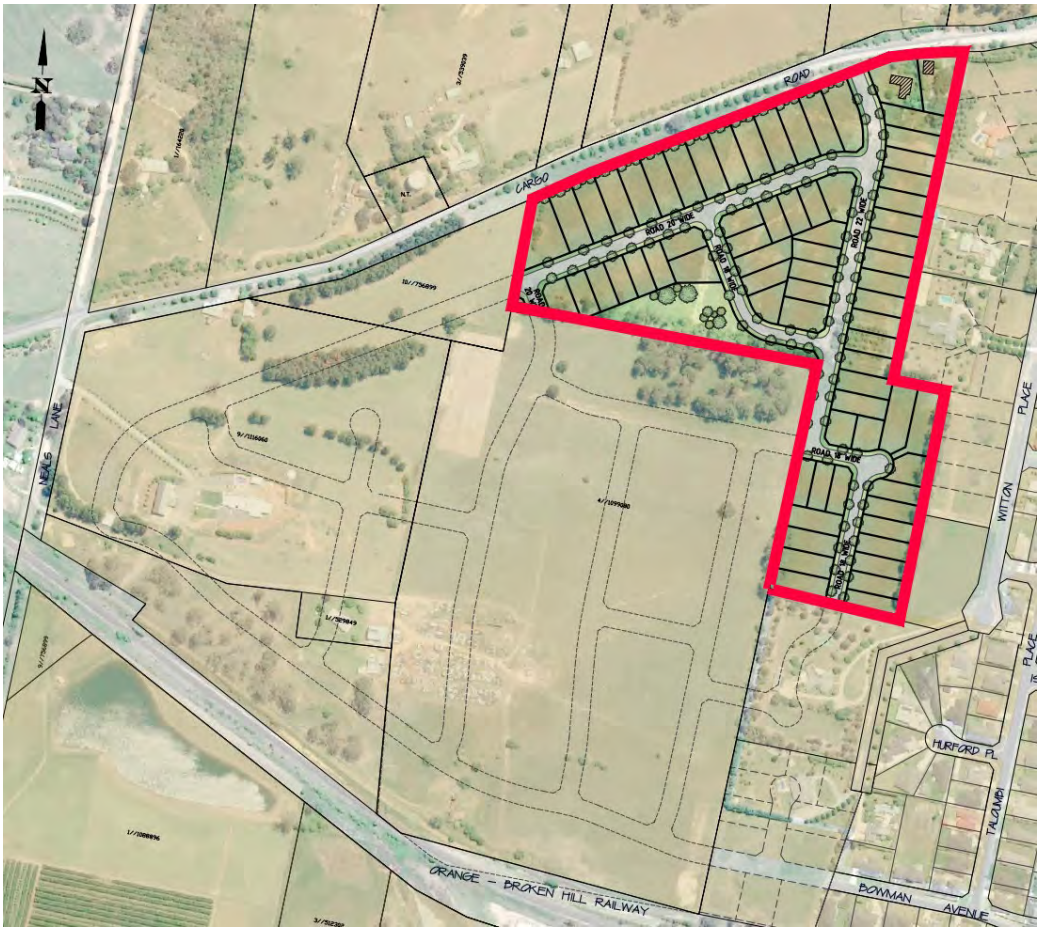
FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

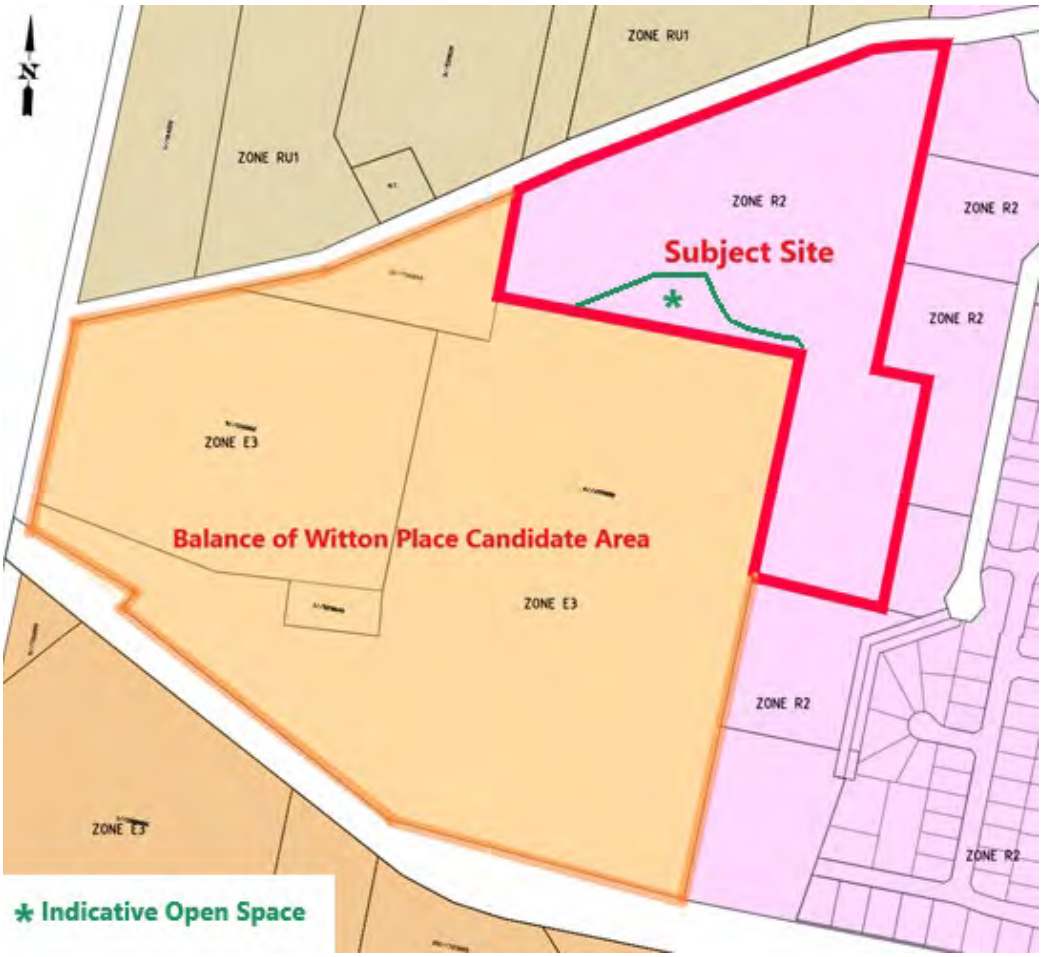
SUPPORTING INFORMATION

The planning proposal for 277 Cargo Road (Lot A DP 408148) involves amendments to the Orange Local Environmental Plan 2011 in four key aspects, land use zones, minimum lot sizes for subdivision, drinking water catchment mapping and biodiversity sensitivity mapping.

The subject land comprises part, approximately 1/3, of the Witton Place Candidate Area identified in the Orange Local Housing Strategy. The proposal is broadly consistent with the pattern of development and requirements outlined in the housing strategy and if delivered will provide 72 residential lots, and 1 "park" lot as public open space. The balance of the candidate area is anticipated to yield a further ~150 residential lots and additional open space.

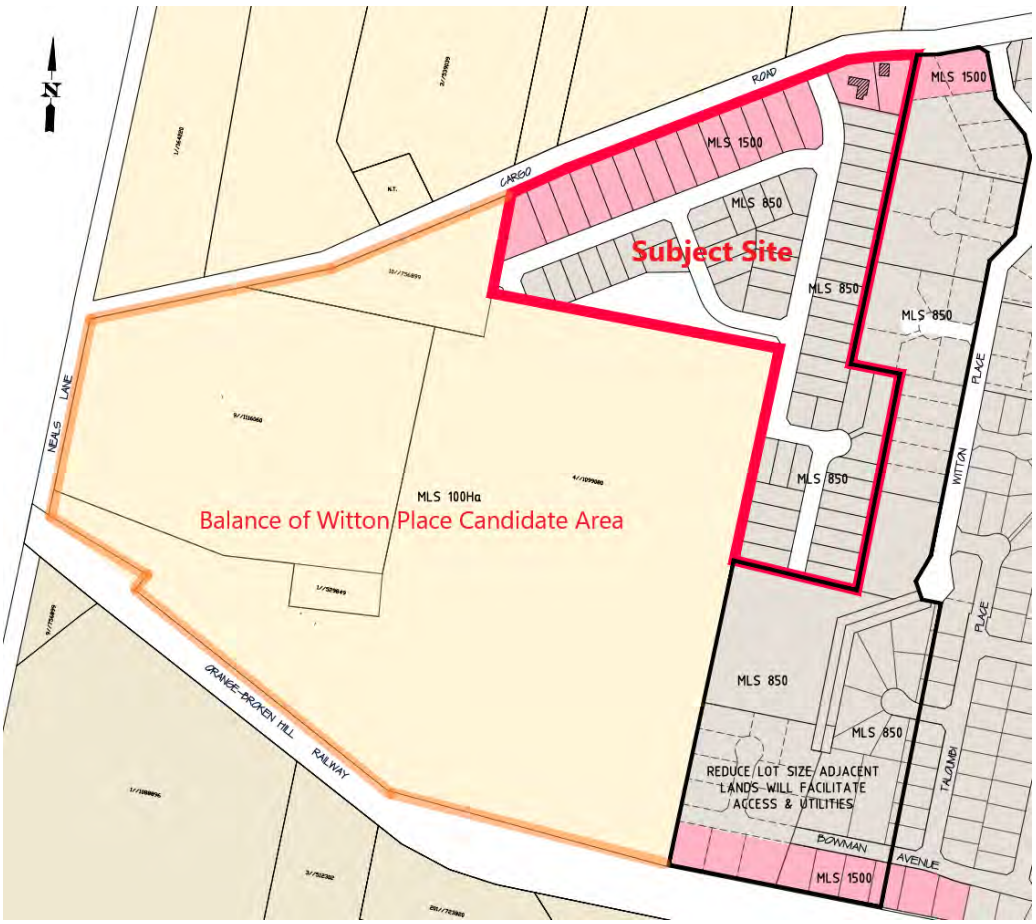


The conceptual layout provided allows for connections with the remainder of the candidate area. There is potential for an eastward connection to Witton Place subject to reducing the lot yield by 1 lot. The road layout shown, particularly over the balance of the candidate area, is indicative only and will be determined during a future assessment of a DA for subdivision.



1. **Land use zoning** - Currently a mix of Zone RU1 Primary Production in the north eastern corner and Zone C3 Environmental Management of the majority of the site. The proposal seeks to amend this to Zone R2 Low Density Residential on the subject land. The balance of the candidate area is to remain C3 Environmental Zone.

   The blanket R2 zone shown is not intended to exclude the provision of an area of open space. However, in the interest of clarity support for the proposal should be contingent upon adjusting the zoning map to reflect the provision of open space within an RE1 Public Recreation Zone. As the open space will primarily benefit the future subdivision and not the broader community it is considered appropriate that the open space be dedicated to Council at zero cost.

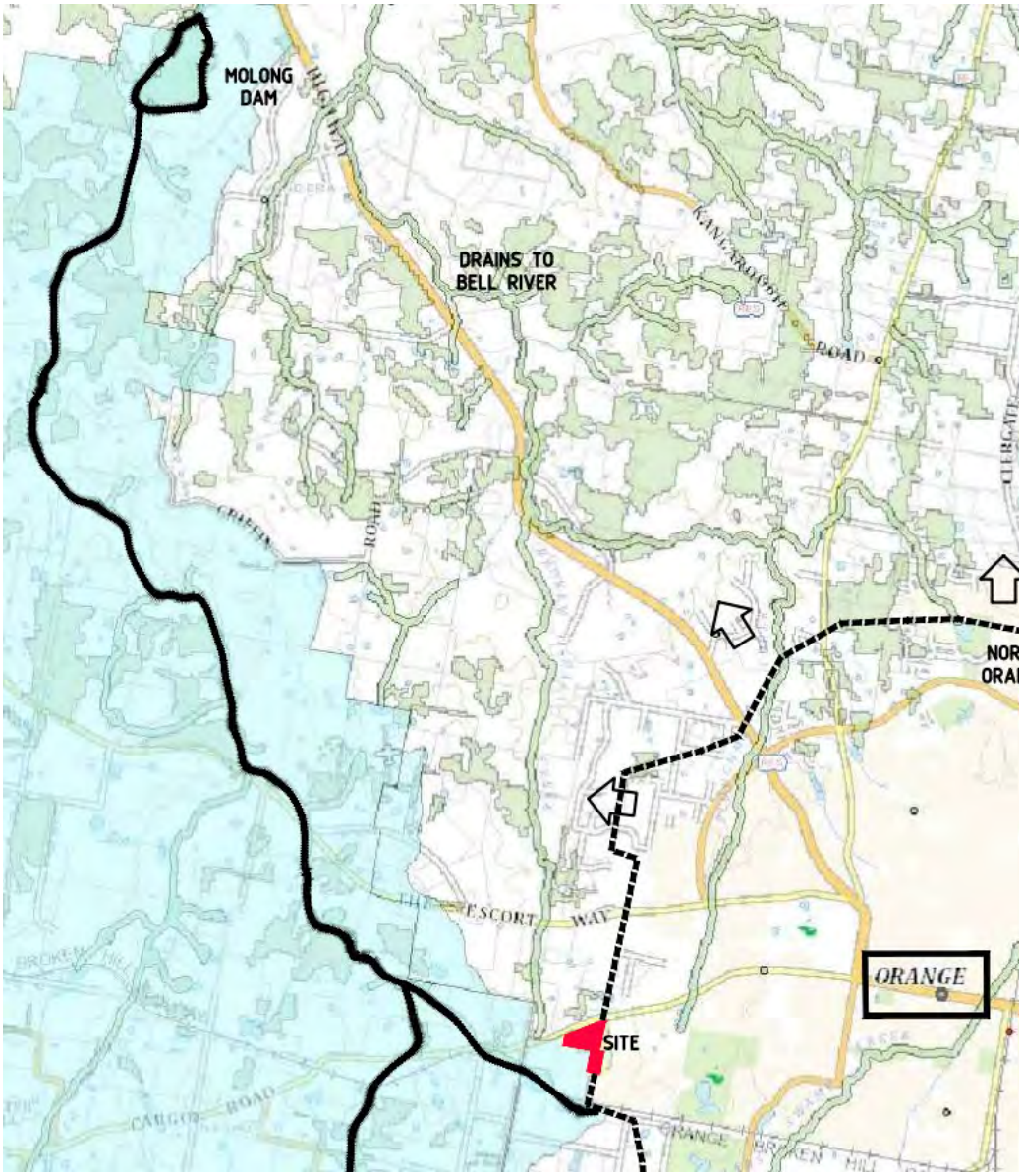


2. **Minimum Lot size** - The land is currently subject to a 100ha minimum. The proposal seeks to amend this to a lot size of 850m^2 for the majority of lots, while 1,500m^2 to apply for lots fronting onto Cargo Road to allow appropriate setbacks for both acoustic amenity and landscaping for visual appeal on the approach to Orange.



New lots along Cargo Road are intended to have significant depth to the blocks allowing built form to be positioned towards the internal roads. The Cargo Road frontage in this area is benefitted by a row of mature street trees (see above) which is expected to preserve a scenic approach to the city.

The position of the existing dwellings in the northeast corner of the site are closer to Cargo Road than would be expected of future dwellings. However, they are each oriented to address the road and benefit from extensive landscaping and street trees.



3. **Drinking Water Catchment Map** - The proposal suggests removing the drinking water catchment status to enable Complying Development. This would require on-site detention and WSUD sufficient to protect water quality. The water catchment concerned is the upper reaches of the Molong water catchment. It is anticipated that consultation will be required with Cabonne Shire Council in this regard.

4. **Terrestrial Biodiversity Map** - The land has pockets of High Sensitivity mapping (Environmentally Sensitive Area) and the proposal seeks to remove this over the pine trees in the centre of the Site that have limited if any native ecological function.

Ministerial Directions

Section 9.1 of the Act allows for Ministerial Directions that need to be considered when undertaking LEP amendments. The proposal identifies and responds to relevant directions as follows:

Direction 1.1 *Implementation of regional plans* - the proposal notes the regional plan has competing objectives of balancing protection of agricultural land with the need for sustainable urban growth. The housing strategy has nominated this site for urban growth due to proximity to the urban fabric and ability to readily service the site. On balance it is considered the adopted housing strategy has established the preferred long term use of this site for urban development. This inconsistency is supported by staff.

Direction 3.1 *Conservation Zones* - the proposal seeks removal of the C3 Environmental Management Zone, to be replaced with the R1 General Residential Zone. While inconsistent with the direction this is the result of the housing strategy identifying the site for urban expansion. This inconsistency is supported by staff.

Direction 3.2 *Heritage Conservation* - the proposal has not provided a *Heritage Impact Statement* and notes that there is no known indigenous or non-indigenous heritage on the site and an AHIMS search did not indicate any known sites. The site has a lower risk of impact on archaeology due to location and historic land disturbance. The absence of a heritage impact statement is supported by staff for the reasons stated.

Direction 4.4 *Remediation of Contaminated Land* - while the direction may be applicable the proposal has provided a *Preliminary Contamination Assessment* and further studies will be prepared during DA assessments. The Envirowest report finds the site requires remediation to be considered suitable for residential use. Five areas of concern were identified affecting sites ranging from $1m^2$ to $70m^2$ in area (totalling $176m^2$) at depths of between 150mm to 300mm. Given the overall site is approximately $109,883m^2$ in area, the areas of concern amount to 0.16% of the site. Such hotspots can be further investigated and remediated as part of a future DA assessment process. On this basis, it is considered reasonable to proceed with the rezoning as the extent of remediation needed is unlikely to impose significant cost on the future development of the land.

Direction 5.1 *Integrating Land Use and Transport* - as the proposal creates urban land there is a need to consider transport options. The Transport Assessment finds:

- there is good potential for local bus routes to reach within 400m of all future dwellings

- compliance with the subdivision code will ensure active transport infrastructure is provided linking to the recently constructed shared path east of Witton Place
- the road network continues to operate at a good Level of Service though to 2033.

On this basis staff are supportive of the proposal, noting that Cargo Road is a classified road and ultimate access arrangements will need to be confirmed in consultation with Transport for NSW.

Direction 5.2 *Reserving Land for Public Purposes* - the proposal notes the requirements of the direction and confirms that future roads and public parks will be dedicated to Council as required. Staff support the dedication of public roads and public parks as indicated. Since the amenity benefits of the public parks will primarily benefit the future residents of the estate it is appropriate that the park be dedicated to Council at no cost. This can be clarified through a planning agreement with the proponent.

Direction 6.1 *Residential Zones* - the proposal is consistent with the local housing strategy and represents an efficient use of land and infrastructure on the urban fringe. The proposal is considered to be consistent with the direction.

Direction 6.2 *Caravan Parks and Manufactured Home Estates* - technically the direction may apply to some residential zones but these uses are not intended for the site. Staff acknowledge the applicability of the direction and agree that these uses are unlikely to be sought due to market conditions.

Direction 8.1 Mining, Petroleum Production and Extractive Industries - the direction may technically be applicable however there has been no indication of extractive resources and there is not known to be any exploration licences relating to the land. Staff agree that the impact on extractive industries is considered to be low risk.

Direction 9.1 *Rural Zones* and ***Direction 9.2*** *Rural Lands* - these directions are applicable to rural and conservation zones. The proposal seeks a variation to these directions, which rezone rural / environmental land for residential purposes. The rationale offered is that the local housing strategy has considered the best use of the land and found it suitable for residential urban development. This position is supported by staff.

Government Agencies

Transport for NSW (TfNSW)

TfNSW acknowledge that the land has an existing access of Cargo Road, but this serves only a single property. Their stated preference is for the estate to be accessed via local road connections to the east (such as Bowmans Avenue / Witton Place). It is noted that the development site is approximately 300m west of an existing intersection that provides dedicated turning access (CHR/AUL) off Cargo Road.

Figure 8-4 of the Orange Local Housing Strategy also indicates an 'Indicative road access and alignment' for Witton Place, this is the preferred servicing option from TfNSW's perspective. Additionally, the existing house at 277 Cargo Road should primarily be accessed from an internal road, rather than driveway access off Cargo Road. Sight distances at this location are hindered by the curved alignment of the road and the incline as vehicles approach.

Department of Primary Industries - Agriculture

DPI-Ag were consulted during the early scoping phase of the proposal in October 2022. At that time they noted that the site is mapped as Biophysical Strategic Agricultural Land (BSAL) and draft State Significant Agricultural Land. While this status has not been recognized in the Central West Orana Regional Plan, the draft Blayney-Cabonne-Orange Sub-Regional Rural and Industrial Land Strategy. DPI-Ag also note that the Orange Local Housing Strategy has not been formally endorsed by the Department of Planning and Environment.

The DPI-Ag advice is they support the protection of highly productive land for agricultural purposes. Notwithstanding this they have also acknowledged that "on occasion this land can meet a higher and better use these uses should be strategically planned for including an endorsement process and incorporation into regional planning."

The advice then notes the proposal is for low density development rather than medium-high density which might have represented a better 'return' for the loss of prime agricultural land. On consideration of the above DPI-Ag do not support the proposal but are happy to review their position once the housing strategy has been endorsed by DPE.

It should be noted that the Department of Planning and Environment have since advised that they are not in the practice of formally endorsing local housing strategies, but are content to acknowledge the OLHS as the formally adopted strategy of Council. In view of this it is considered appropriate for a gateway determination to require consultation with DPI-Ag as part of the agency consultation phase.

State Environmental Planning Policies

SEPP (Primary Production) 2021 - Section 4.12 of the Planning Proposal seeks variation based on the recommendations of the Housing Strategy and other mitigating factors outlined in the proposal.

SEPP (Housing) 2021 - The Site is unlikely to rely on this SEPP for approvals but can comply where relevant.

SEPP (Biodiversity and Conservation) 2021 - Vegetation and biodiversity are addressed in Section 4.6 of the Planning Proposal. The site has an area of mapped Terrestrial Biodiversity - Environmentally Sensitive Area (ESA). On site investigation has shown that this mapping relates to introduced pine species and do not have any significant native ecological function, beyond bird life. On this basis the proposal suggests that the ESA mapping be updated to remove the ESA from the site.

Notwithstanding this the concept design has indicated retention of the trees within a public park lot that would be dedicated to Council as part of the development. Assuming that a majority of trees can be contained within the proposed park the extent of tree clearance on the balance of the site is minimal. Over time residential landscaping and street tree planting would ultimately increase the extent of tree cover.

SEPP (Resilience and Hazards) 2021 - Contamination, bushfire and flooding are addressed in Sections 4.11, 4.8 and 4.3 of the Planning Proposal respectively. A Preliminary Contamination Assessment by Envirowest has been supplied which identified five small hotspot areas of concern that in total equate to 0.16% of the site such that remediation of the affected areas can be undertaken as part of the development assessment process.

With regard to Bushfire the site is not mapped as bushfire prone land, is largely cleared due to past agricultural activity and the overall candidate area is bordered by Cargo Road, Neals Lane and the Railway corridor with urban development to the east. Notwithstanding this land to the west of the site, in Cabonne Shire, is mapped as bushfire prone due to Vegetation Category 3 (grasslands). The pockets of trees on the site are generally not connected such that there is no continuous canopy. Neal Lane and Cargo Road serve as permitter roads providing a useful break to any hazard. The conceptual road layout provides for emergency egress via both Molong Road and future connections to Witton Place (and Bowman Avenue will be a further egress point once the balance of the candidate area is developed).

In terms of flooding, the site sites towards the ridgeline and falls to the west. There is a drainage depression that is unlikely to be affected by mainstream flooding. A first order stream extends south of the site to the western boundary near Cargo Road / Neals Lane where there is an existing dam. There are no formed channels or riparian vegetation and another drainage corridor south of the railway (beyond the candidate area). Given the elevated position of the site in the landscape it is considered reasonable to support the rezoning in the absence of a detailed flood study for the site. A stormwater management plan can be required during assessment of a future DA for the subdivision to ensure that post-development runoff levels are consistent with pre-development flows.

SEPP (Resources and Energy) 2021 - The mineral potential of the site is addressed in Section 4.13 of the Planning Proposal. This found the site is not directly affected by any known extractive industries and given the BSAL status of the land mining is less likely to occur into the future.

SEPP (Transport and Infrastructure) 2021 - Access and traffic matters are addressed in Sections 2.3.2 - 2.3.6 of the Planning Proposal. While there remain some matters to resolve with Transport for NSW around the final design and location of an access point onto Cargo Road it is considered that this can be resolved through the agency consultation phase.

During a Council - TfNSW - Proponent meeting held 28 June 2023 various options were discussed. The meeting did not present a basis for not rezoning the land and acknowledged that the site currently has access to Cargo Road. Remaining issues relate to the number of access points, sight line requirements, the desirability to retain the line of mature street trees and whether an access point should also consider a longer term potential connection to the north side of Cargo Road. The latter is not contemplated under the local housing strategy but in theory could become a factor during a future strategy review.

Design options for a Cargo Road access point could range from turning lanes through to a roundabout. Speed limits will also need to be considered prior to the matter reaching public exhibition.

SEPP (BASIX) 2004 - will be addressed by future dwelling applications.

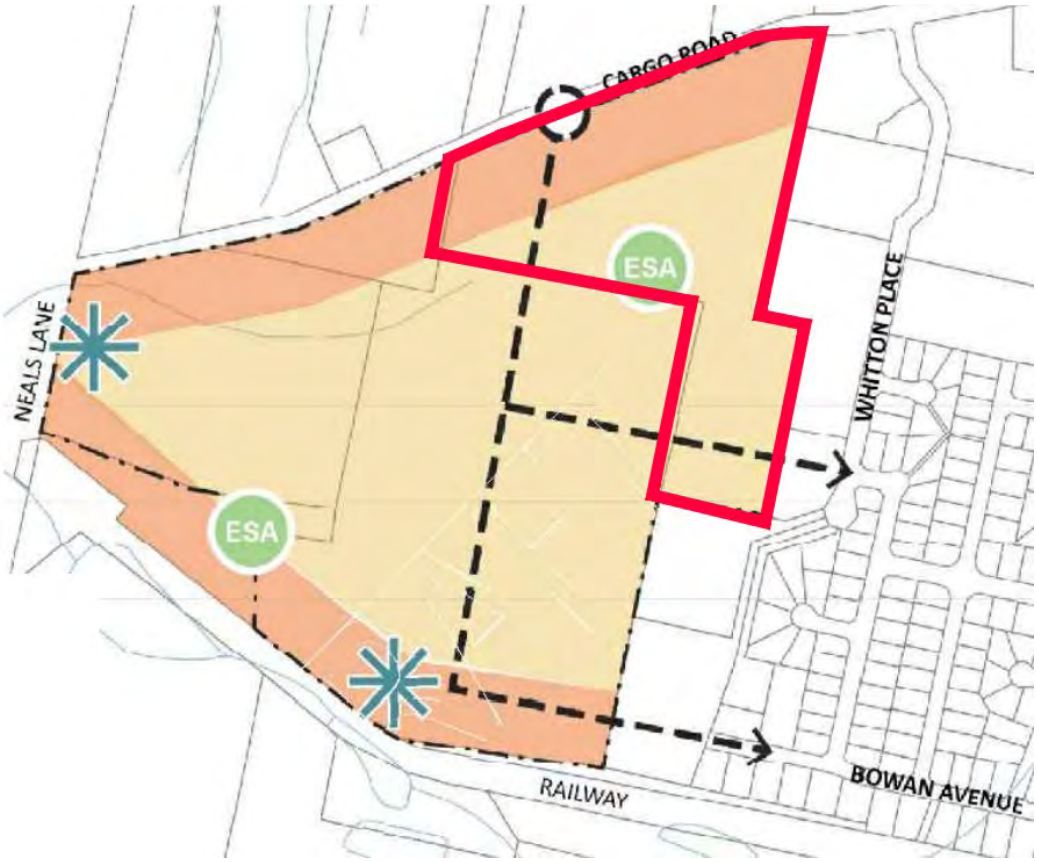
Central West and Orana Regional Plan

Sections 5.5.1 and 5.5.2 of the Planning Proposal provide responses to relevant priorities, directions and actions of the Central West and Orana Regional Plan (CWORP). The responses are primarily in the form of cross-referencing other sections of the Planning Proposal document as the subject matter of the CWORP priorities, directions and actions have significant overlap with other topics in the assessment framework.

Fundamentally, the responses show that the proposal is consistent with the CWORP.

Orange Local Housing Strategy

The site forms part of the Witton Place Candidate Area that was identified for urban residential growth in the Local Housing Strategy. The Strategy was adopted at Council's meeting in February 2022. The site area shows the portion of the candidate area that is included in this Planning Proposal.



The housing strategy outlines a range of matters to be addressed via the preparation and adoption of a development control plan for the candidate area. This includes:

- Staging plan
- Transport and Movement hierarchy
- Landscaping Strategy
- Passive and Active Recreation Network
- Stormwater and Water Quality Management Controls
- Natural Hazards
- Urban Design and Significant sites controls
- Higher Density Living
- Public Services and Facilities

The Planning Proposal document has quoted these requirements (pages 43-44) and asserts to have addressed these matters under Section 2.2 of the Planning Proposal. However, this section does not take the form of a development control plan and is instead a table outlining opportunities and constraints and where those matters are addressed in the document. The matters outlined in the table of Section 2.2 do not map directly to the housing strategies DCP requirements.

Having reviewed the planning proposal document and responses to the various issues, opportunities and constraints in Section 2.2 and elsewhere in the document, it is considered that there is sufficient information to proceed with rezoning and amendment of the LEP subject to the land being mapped and identified as an Urban Release Area (URA) under the LEP.

Urban Release Area (URA)

A URA designation means that while the zone, lot size and other map changes can occur, actual development of the site is effectively placed on hold pending a DCP being prepared and adopted that addresses a range of matters outlined in Section 6.3 of the LEP. The matters identified under Section 6.3 directly match the matters identified in the Housing Strategy.

This correlation was an intentional decision during the drafting of the Housing Strategy as it was anticipated that some candidate areas might come forward without fully addressing the DCP controls sought. In such cases a URA listing would allow the LEP amendment to progress while work on a Candidate Specific DCP continues.

Section 2.8 of the Planning Proposal consists of a request to NOT apply a URA to the site arguing that “there is sufficient detail in this Planning Proposal”. This view is not supported as the Planning Proposal document exists only to inform an LEP amendment process and is not part of the assessment framework for Development Applications. Consequently a Planning Proposal could include a wide range of "commitment”" that become unenforceable if not incorporated into either the LEP or an associated DCP.

For this reason, as well as the potential need to negotiate a Voluntary Planning Agreement in relation to the dedication of the public open space, staff recommend that support for the planning proposal be conditional on the inclusion of a URA applying to the site.

Servicing

Technical services advise that the site can be serviced. The following matters should be provided or addressed as part of the DCP preparation process.

- a Water and Sewer Servicing Plan is to be provided for review
- a preliminary water modelling was undertaken however a full Water Servicing Strategy is to be provided
- the sewer pump station location must be determined and shown on a plan. The location must be capable of servicing the entire candidate area in the Orange Housing Strategy.

Additionally, the developer will be responsible for all costs for extending water and sewer services to the lot, including the full cost of the sewer pump station, sewer rising main and water mains. Section 64 contributions will also be applicable.

Conclusion

The Planning Proposal is broadly consistent with the intended outcomes of the Orange Local Housing Strategy for the Witton Place Candidate Area. However, the proposal has not provided a detailed draft DCP to address the range of matters indicated in the strategy.

As such, Council has the option to either return the proposal to the proponent with guidance on what further work is required, or alternatively Council may support the proposal proceeding at this time subject to the site being included in an Urban Release Area (URA) to ensure that actual development of the site will be held pending resolution of the DCP matters.

In either case a Voluntary Planning Agreement should be negotiated to provide clarity and certainty in respect of the dedication of public open space and potentially other matters arising from infrastructure servicing for both the subject land and the balance of the candidate area.

Proceeding with the proposal, subject to a URA listing, is considered to provide the proponent with a degree of confidence while also ensuring that the interests of Council, Transport for NSW and other agencies are protected.

ATTACHMENTS

1 Planning Proposal (redacted) - 277 Cargo Road, D23/61596
2 Planning Proposal - Site Plan and Conceptual Subdivision Design (redacted), D23/61602
3 Planning Proposal - Flora and Fauna Assessment (redacted), D23/63828
4 Planning Proposal - Contamination Assessment (redacted), D23/63799
5 Planning Proposal - Traffic Noise Assessment (redacted), D23/63806
6 Planning Proposal - Transport Assessment (redacted), D23/63815

Department of Planning, Housing and Infrastructure

Gateway Determination

Planning proposal (Department Ref: PP-2023-934): *Rezone, MLS and mapping amendments at 277 Cargo Road, Orange*

I, the A/Director, Southern, Western and Macarthur Region at the Department of Planning, Housing and Infrastructure, as delegate of the Minister for Planning and Public Spaces, have determined under section 3.34(2) of the *Environmental Planning and Assessment Act 1979* (the Act) that an amendment to the Orange Local Environmental Plan 2011 to rezone land to R2 Low Density Residential, reduce the minimum lot size and amend mapping should proceed subject to the following:

Gateway Conditions

1. Prior to public exhibition, the planning proposal is to be updated to:

   (a) Reference correct zone name - C3 Environmental Management. All references and mapping referencing 'E3' are to be removed.

   (b) Reference current adopted minimum lot size mapping. All mapping showing blue outline and all references to 'Area 1' are to be removed and all applicable map references are to be updated from 'V' to 'V1'.

2. Consultation is required with the following public authorities and government agencies under section 3.34(2)(d) of the Act and/or to comply with the requirements of applicable directions of the Minister under section 9 of the Act:

   - Cabonne Shire Council (regarding the drinking water catchment matters)
   - Department of Climate Change, Energy, Environment and Water (regarding removal of biodiversity mapping)
   - Department of Primary Industries (regarding impact to BSAL mapped land)
   - Transport for NSW (regarding access to classified road, infrastructure arrangements, and introduction of URA)

   Each public authority is to be provided with a copy of the planning proposal and any relevant supporting material via the NSW Planning Portal and given at least 30 working days to comment on the proposal.

3. Public exhibition is required under section 3.34(2)(c) and clause 4 of Schedule 1 to the Act as follows:

   (a) the planning proposal is categorised as standard as described in the *Local Environmental Plan Making Guideline* (Department of Planning and Environment, August 2023) and must be made publicly available for a minimum of 20 working days; and

   (b) the planning proposal authority must comply with the notice requirements for public exhibition of planning proposals and the specifications for material that must be made publicly available along with planning proposals as identified in *Local Environmental Plan Making Guideline* (Department of Planning and Environment, August 2023).

4. A public hearing is not required to be held into the matter by any person or body under section 3.34(2)(e) of the Act. This does not discharge Council from any obligation it may otherwise have to conduct a public hearing (for example, in response to a submission or if reclassifying land).

5. The LEP should be completed on or before 30 April 2025.

Dated 1 August 2024

Chantelle Chow
Acting Director, Southern, Western and Macarthur Region
Local Planning and Council Support
Department of Planning, Housing and Infrastructure

Delegate of the Minister for Planning and Public Spaces

PP-2023-934 (IRF24/1506)

ORANGE CITY COUNCIL

Revised Planning Proposal

(PP-2023-934)

277 Cargo Road, Orange (Lot A DP408148)

Submitted for Gateway Alteration

Prepared by Orange City Council

November 2024

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1 Introduction

1.1 Overview

This revised Planning Proposal has been prepared by Orange City Council. The proposal seeks to amend Planning Proposal PP-2023-934, which is subject to an existing Gateway Determination issued by the NSW Department of Planning, Housing and Infrastructure (DPHI) on 1 August 2024.

PP-2023-934 applies to land known as "Stage 1" of the Witton Place Candidate Area. The Witton Place Candidate Area is one of several greenfield precincts identified by the Orange Local Housing Strategy (adopted 7 June 2022) as being suitable for investigation for rezoning and associated residential development. Under the Orange Local Housing Strategy, the Witton Place Candidate Area is identified as a critical site for meeting the City of Orange's long term housing needs. It is anticipated that, subject to future rezoning and detailed site suitability assessment, the candidate area as a whole will yield around 300 new dwellings along with associated public open space, amenities and community infrastructure.

The Stage 1 site comprises Lot A DP408148 (known as No. 277 Cargo Road) and has an area of 10.99 hectares. PP-2023-934 broadly seeks to make changes to the Orange Local Environmental Plan (LEP) 2011 in order to facilitate development of the Stage 1 site for low density residential development.

This revised Planning Proposal seeks to amend the previously submitted proposal by:

1. Removing changes to the "Drinking Water Catchment" status of the land as previously proposed (in response to matters raised in consultation with Cabonne Council and in DPHI's Gateway Determination).
2. Further diversifying the land use zoning and minimum lot sizes proposed to better reflect site conditions and more closely align with the housing priorities of the Orange Local Housing Strategy, in particular Housing Priority 2 ('Increase housing supply and diversity to meet the population's needs'), Housing Priority 4 ('Support the supply of affordable housing) and Housing Priority 5 ('Facilitate and guide housing design, creativity and innovation').
3. Ensuring the proposal and its supporting technical material better reflects the Orange Local Housing Strategy's requirement for candidate areas to be subject to comprehensive urban design analysis and associated concept planning prior to rezoning.
4. Responding to housing and neighbourhood design opportunities resulting from more detailed urban design analysis and concept planning undertaken the Candidate Area as a whole (Appendix A), including the identification of strategic opportunities for improved housing diversity and better place making within the Stage 1 site.
5. In combination with the above, refining the proposed quantity and layout of public recreation land proposed within the Stage 1 site to reflect a more holistic and strategic approach to the prioritisation of public open space investment within the Witton Place Candidate Area as a whole. This includes the removal of the RE1 Public Recreation land, and the dedication of open space as per the Structure Plan through a Planning Agreement.

The revised Planning Proposal has been prepared by Orange City Council in consultation with the developer, Landorange Partnership. Where relevant, additional technical advice relating to traffic management and site servicing is provided to supplement the technical studies previously submitted in support of the original Planning Proposal.

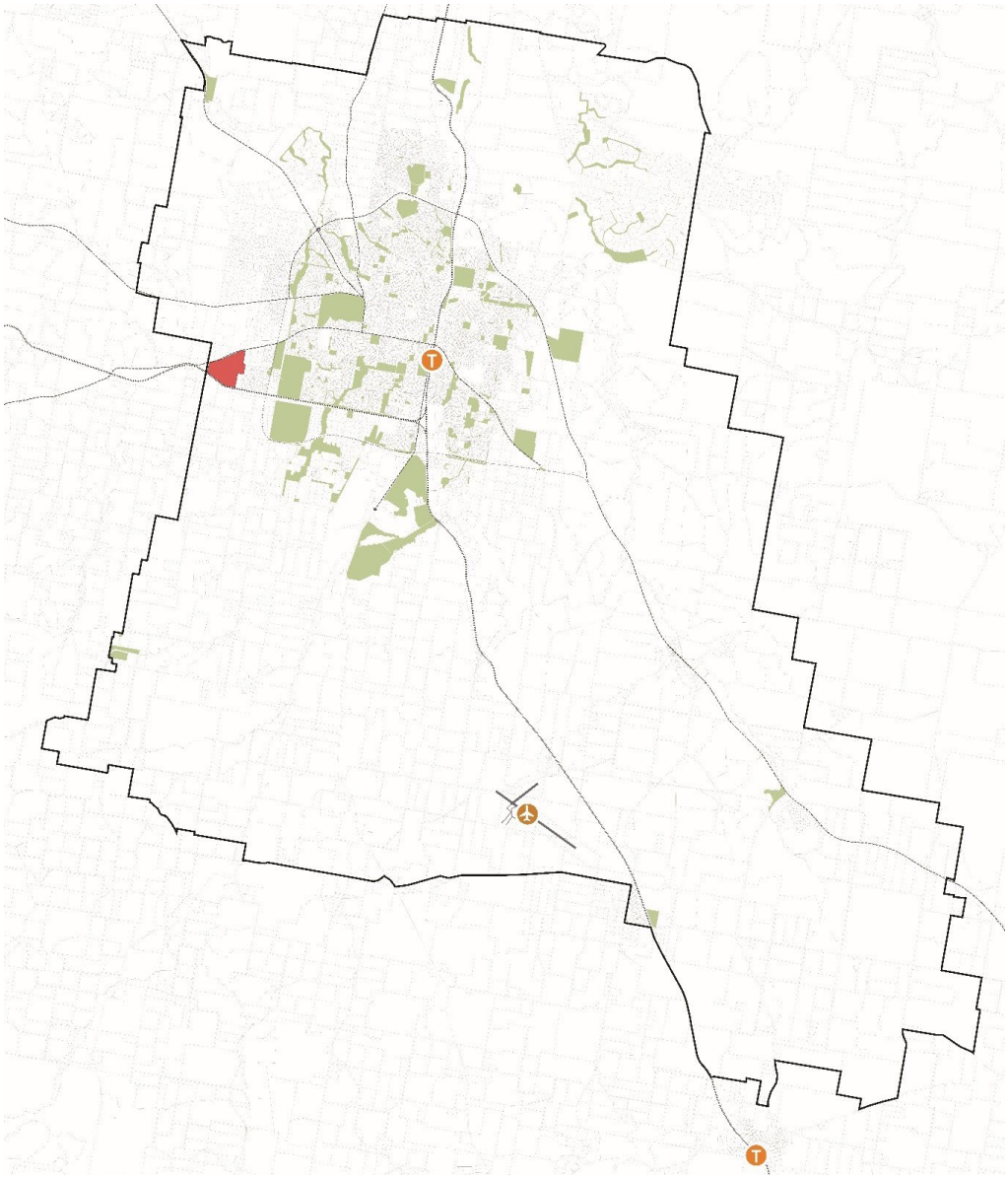


Figure 1 Site location

1.2 The proposal to date

An initial Planning Proposal to amend the Orange LEP 2011 in relation to Stage 1 was prepared by Landorange Partnership and was submitted for consideration on 5 May 2023. At its meeting of 5 September 2023, Council's Planning and Development Committee resolved to support the referral of the proposal to DPHI for Gateway review. A Gateway determination supporting the progress of the proposal was subsequently issued by DPHI on 1 August 2024.

In its Gateway Determination DPHI raised, among other things, the need to consult with Cabonne Council regarding the proposed removal of the Stage 1 site from the OLEP 2011's Drinking Water Catchment Map due to the land's location within the Molong Dam catchment. Council's consultation with Cabonne Council has confirmed its opposition to any change in the Drinking Water Catchment status of the land. The change in status is also considered to be inconsistent with Orange City Council's general approach to development control for land located within drinking water catchments. In order to ensure the Planning Proposal clearly aligns with Council's preferred approach to the management of drinking water catchment assets, and to avoid unnecessary confusion regarding this, it is considered desirable to remove this aspect of the proposal prior to public exhibition.

In addition, Council staff have undertaken more detailed urban design analysis and concept planning for the Candidate Area to ensure the proposal more satisfactorily meets the requirements of the Orange Local Housing Strategy. An urban design study and preliminary concept plan are attached to the revised proposal as Appendix A. This process has, among other things, identified strategic opportunities for greater housing diversity and better neighbourhood planning within the Stage 1 site that will enable development to better align with the housing priorities of the Orange Local Housing Strategy. In this regard, the revised proposal seeks to vary the original proposal by applying a combination of R2 Low Density Residential and R1 General Residential zones in order to facilitate a limited mix of smaller lot housing types located in proximity to proposed new public open space. This is to be supported by amendments to the street, open space and block arrangements shown in the previously submitted concept layout plan in order to foster a more permeable street and green space grid that is significantly more supportive of a sustainable, walkable neighbourhood form for the candidate area as a whole.

The amended Planning Proposal is supported by an updated Urban Design Study, Transport Assessment Addendum and Water and Sewer Strategy Addendum.

1.3 Gateway Determination

A Gateway Determination was issued on 1 August 2024. By amending the Planning Proposal, it is considered that the following conditions have been satisfied:

1. *Prior to public exhibition, the planning proposal is to be updated to:*
    - *Reference correct zone name - C3 Environmental Management. All references and mapping referencing 'E3' are to be removed.*
    - *Reference current adopted minimum lot size mapping. All mapping showing blue outline and all references to 'Area 1' are to be removed and all applicable map references are to be updated from 'V' to 'V1'.*
2. *Consultation is required with the following public authorities and government agencies under section 3.34(2)(d) of the Act and/or to comply with the requirements of applicable directions of the Minister under section 9 of the Act:*
    - *Cabonne Shire Council (regarding the drinking water catchment matters)*

Council had initial discussions in May 2024 with the DPHI to discuss concerns in relation to the request to remove the drinking water catchment overlay. Cabonne Council's, Development Team Leader confirmed that the request should be removed from the Planning Proposal. Further consultation was conditioned through the Gateway Determination issued to Council.

Council has engaged with the Deputy General Manager (DGM Cabonne Services) (October 2024) to obtain advice in relation to the previous Proposals request to remove the drinking water catchment overlay. It has been confirmed that the removal of the overlay is not appropriate given the environmental considerations required to be addressed through future applications. The amended Planning Proposal has been updated to reflect this advice.

1.4 Amendments Proposed

This Planning Proposal (Proposal) seeks to amend the planning controls in Orange Local Environmental Plan 2011 for the site to enable an urban residential subdivision. The Proposal seeks to:

- **Land Use Zoning (LZN)** - Amend existing mix of Zone RU1 Primary Production and Zone C3 Environmental Management to include an urban residential zones, **R1 General Residential** and **R2 Low Density Residential.** Remove the originally proposed RE1 Public Recreation zoned land, as the associated Planning Agreement ensures the provision of open space in accordance with the Structure Plan.
- **Lot Size (LSZ)** – Amend existing lot size of 100ha to **1,500m²** for lots corresponding to the R2 Low Density Residential zone, and **remove** the lot size requirements for the proposed R1 General Residential Zone;

- **Urban Release Area (URA)** – Add URA overlay to the site to trigger the requirements of Part 6 of the LEP in relation to a site-specific Development Control Plan and for the purpose of mapping the site as a Bush Fire Planning - Urban Release Area;
- **Terrestrial Biodiversity Map —** Remove biodiversity overlay over the pine trees in the centre of the site (and overlapping into adjacent site being Lot 4 DP1099080).
- **Buffer Area –** Add a buffer area to the R1 General Residential zone to exclude sensitive locations from the Complying Development provisions to ensure development is consistent with the desired future character for the site.

1.5 Proponent

The proponent is Landorange Partnership Pty Ltd and the revised Planning Proposal has been prepared by Orange City Council

1.6 Supporting Documents

The following reports/plans are provided to support this Planning Proposal:

- **Urban Design Study** – Orange City Council (October 2024)
- **Concept Sewer Servicing Strategy** – Heath Consulting (13 December 2023)
- **Concept Sewer Servicing Strategy Addendum** – Orange City Council and Heath Consulting (25 September 2024)
- **Strategic Bushfire Assessment** – Barson/Envirowest Consulting (30 May 2024)
- **Transport Assessment**– ARC traffic + transport (11 November 2023)
- **Transport Assessment Addendum** - Orange City Council and ARC traffic + transport (1 October 2024)
- **Preliminary Flora and Fauna Assessment**– Envirowest Consulting (29 March 2023)
- **Preliminary Contamination Investigation** – Envirowest Consulting (14 April 2023)
- **Traffic Noise Assessment**– Acoustik (27 April 2023)
- **Conceptual (Cargo Road) Intersection Layout** – Heath Consulting (September 2023)
- **Draft Planning Agreement (PA)** – prepared by Messenger Cole Solicitors (October 2024)

2 The Proposal

2.1 Site Context

Orange is an established Regional City located within the Central West approximately a 257km drive west of Sydney. With an estimated population of 44,244 (Profile.Id, 2023) and projected population growth of 10,800 people between 2016 and 2041, representing an increase of 26%, there is a growing need to ensure that future housing development utilises land in an efficient and effective manner, while supporting the community's vision and values for a growing City (OLHS, 2022). This growth is contingent on protecting the aspects that make Orange special and a desirable place to live; the amenity, rural setting, open spaces, great outdoors, food, wine, natural environment, Gaanha Bula (Mount Canobolas), vistas and heritage.

The Stage 1 site (the site) is located on the western fringe of the City and forms the entry into Orange from Canowindra, Cowra and beyond. The site is located adjacent the southern-most portion of the Ploughman's Valley residential area and is approximately 4km from the Orange Central Business District.



Figure 2 Site context

The site is bound by Cargo Road to the north, the Sydney to Broken Hill railway line to the south and south-west and Neals Lane (the Orange Local Government Area boundary) to the west. The site interfaces large lot residential lots to the east that are located on the ridgeline. Historically, the area is known for apple orcharding and agricultural use including pasture improvement and livestock grazing.

The Witton Place Candidate Area is nominated in Council's OLHS for short term development (0-5 years) as low density residential and large lot residential, subject to a site-specific Structure Plan. The site is 10.99 hectares in size and is the first Planning Proposals to be lodged with Orange City Council.

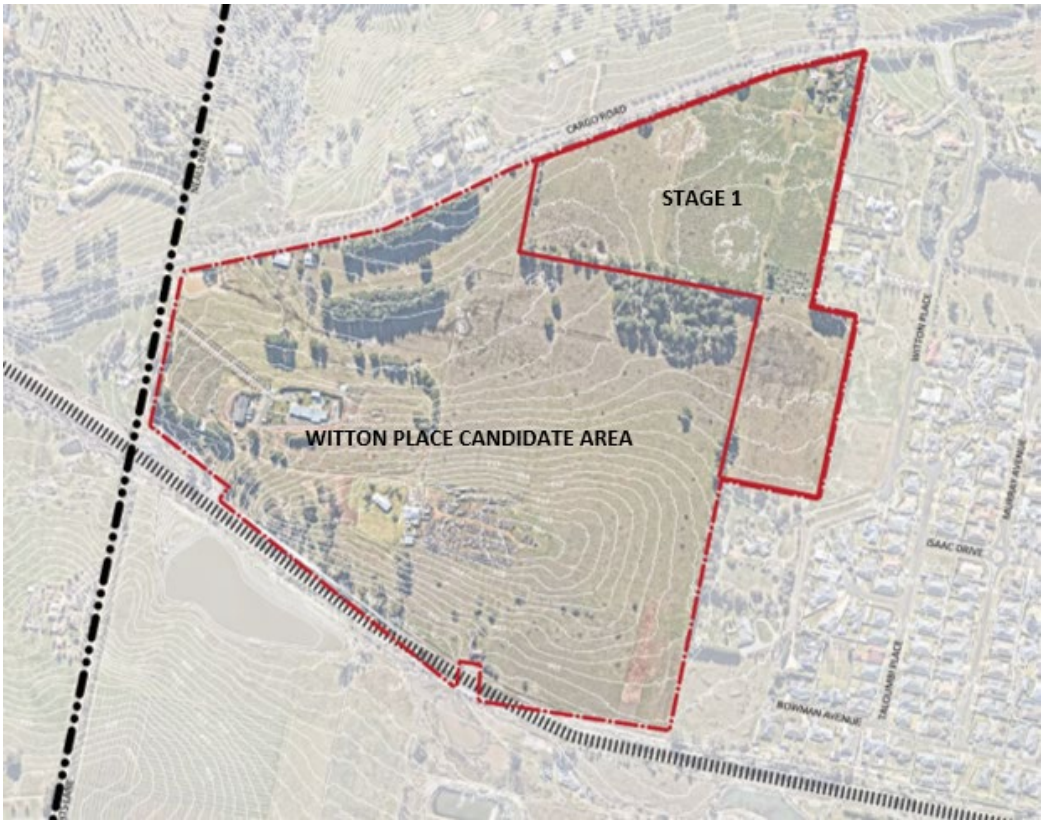


Figure 3 The site

2.2 Statutory Planning Framework

2.2.1 State Legislation Overlays

Asbestos (NOA)

The site is mapped as having a low potential for naturally occurring asbestos.

Biophysical Strategic Agricultural Land

The site is identified as Biophysical Strategic Agricultural Land (BSAL) land.

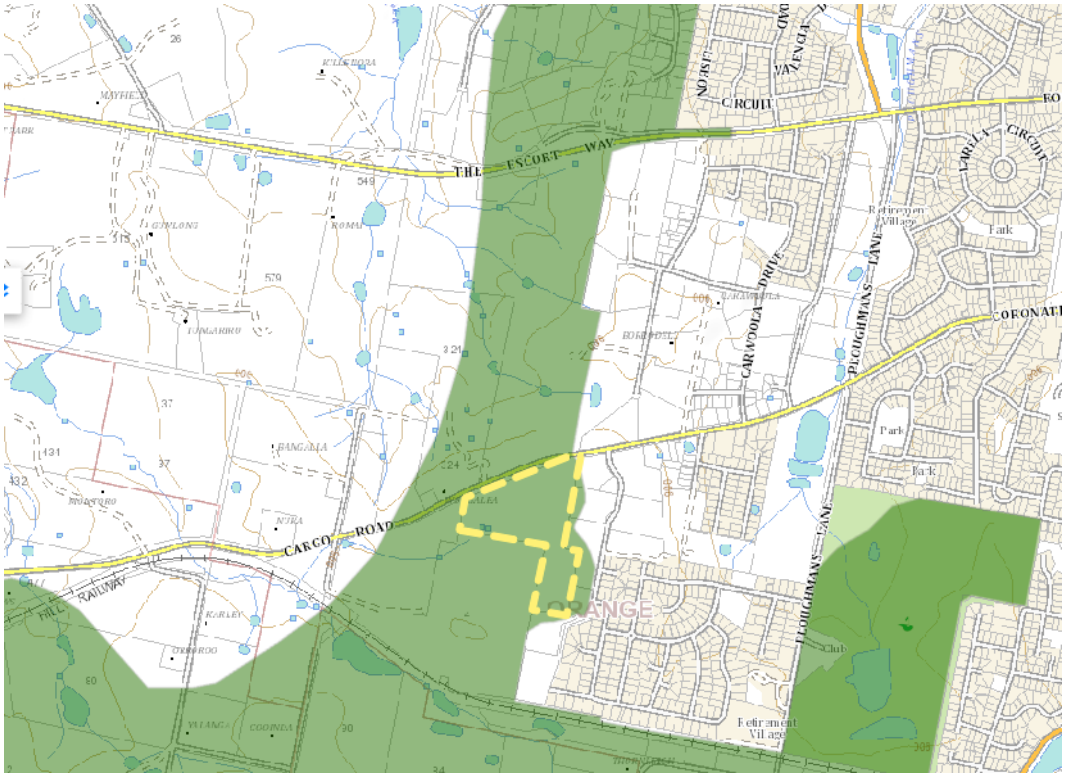


Figure 4 BSAL Map

2.2.2 Orange Local Environmental Plan 2011

Land Use Zone

The site is partly zoned as C3 Environmental Management and RU1 Primary Production. The C3 Zone corresponds to the Drinking Water Catchment (see below). Zone SP2 Infrastructure covers the Cargo Road corridor to the north and the Broken Hill rail corridor to the south of the site.

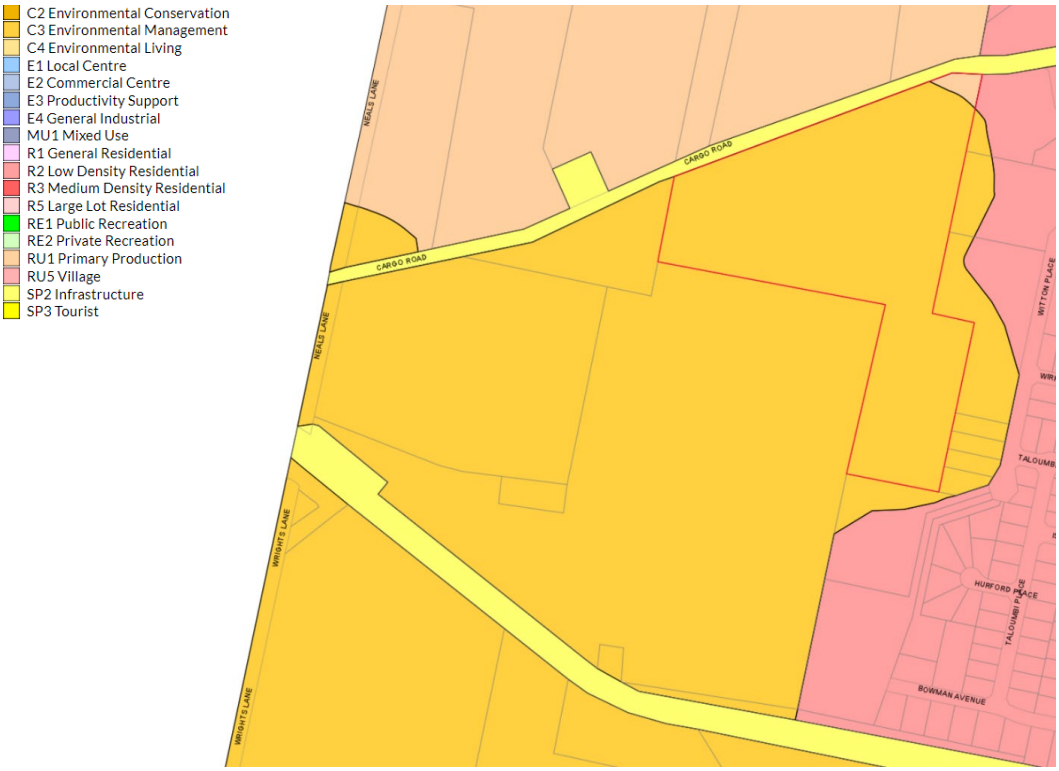


Figure 5 Orange LEP 2011 Land Use Zone Map

Lot Size

The site has a Minimum Lot Size (MLS) of 100 ha. The adjacent land to the east has an MLS of 1,500 m^2 dropping to MLS of 850m^2 east of Witton Place.

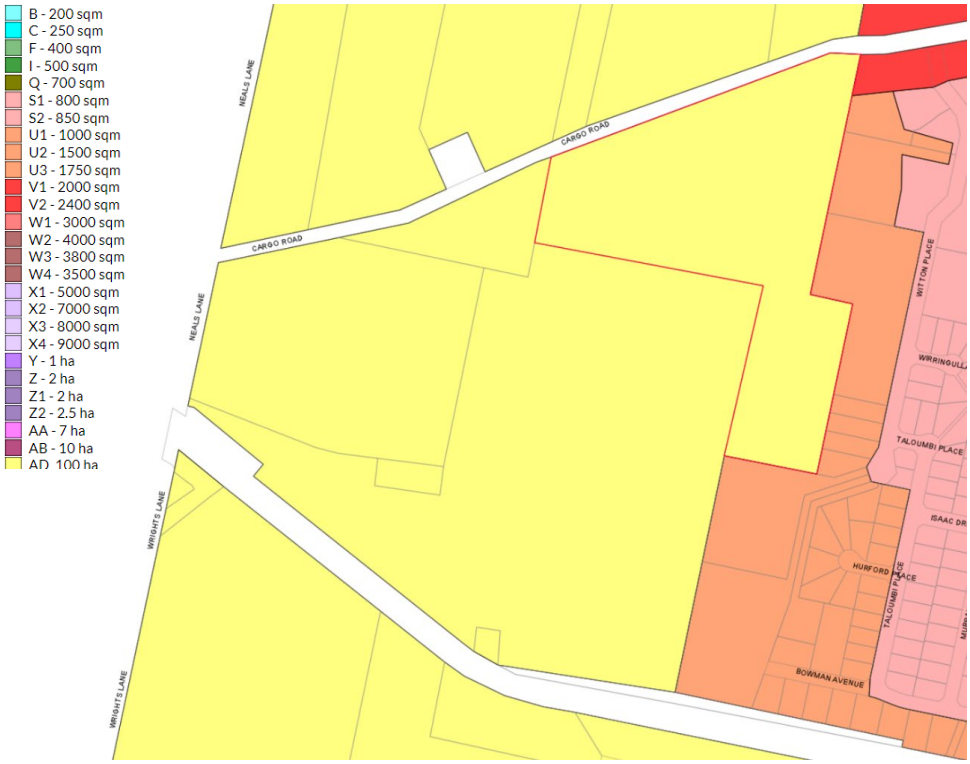


Figure 6 Orange LEP 2011 Minimum Lot Size Map

Drinking Water Catchment

The site is identified as the Molong Dam Drinking Water Catchment.

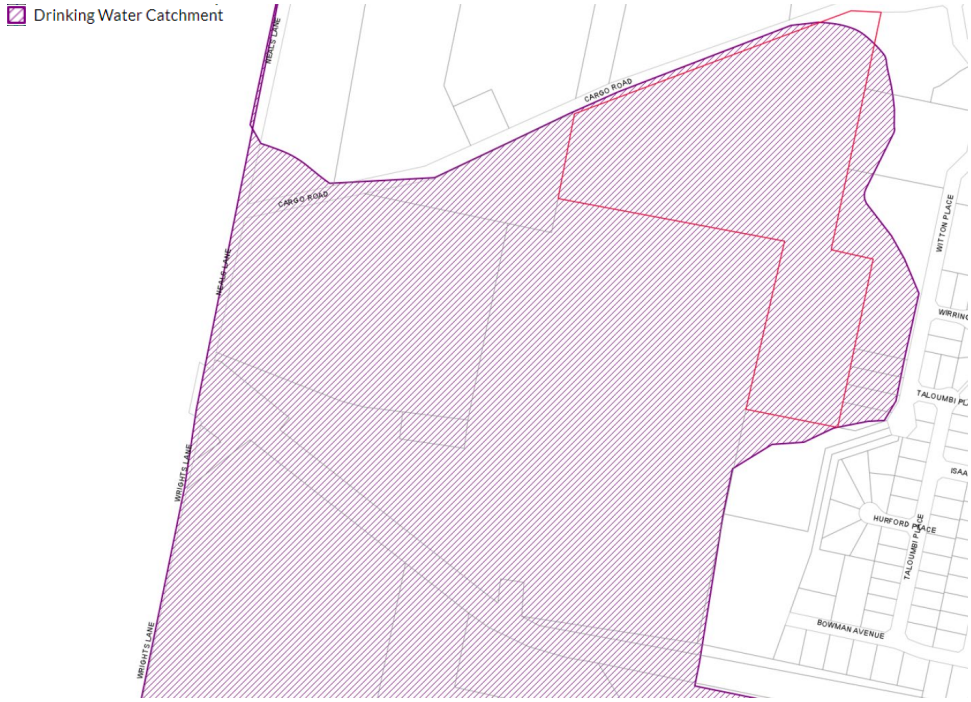


Figure 7 Orange LEP 2011 Drinking Water Catchment Map

Terrestrial Biodiversity

The site contains mapped area of high biodiversity sensitivity.



Figure 8 Orange LEP 2011 Terrestrial Biodiversity Map

Groundwater Vulnerability

The entire site is in a groundwater vulnerability area.

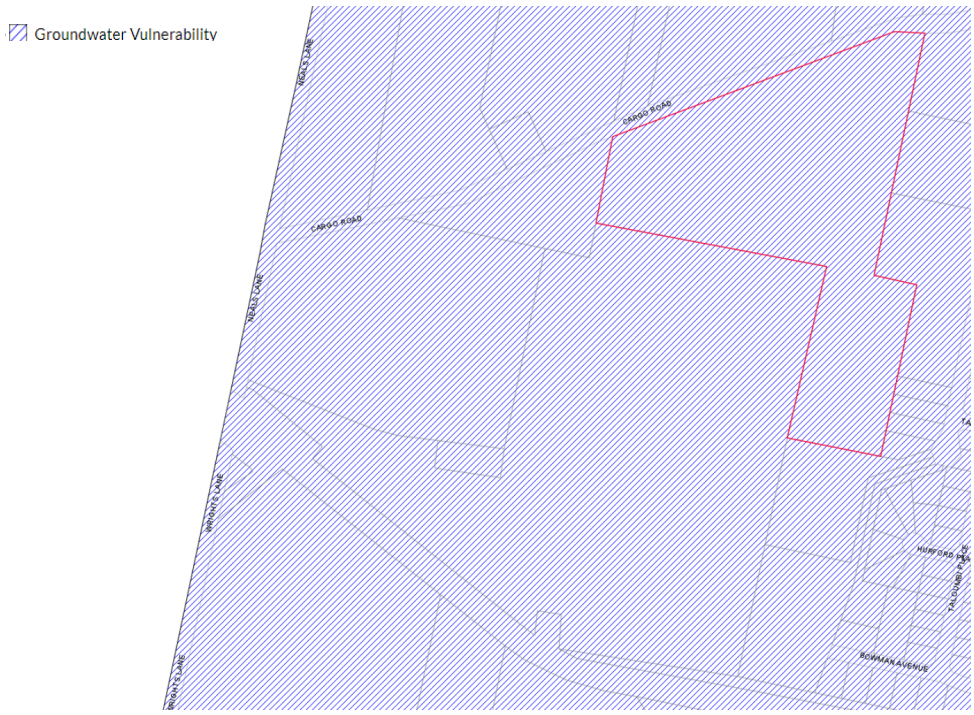


Figure 9 Groundwater Vulnerability Map

Bush Fire Prone Land

The site is identified as Bush Fire Prone Land in the draft Bush Fire Prone Land map, currently with the RFS Commissioner for certification.

Built Form and Heritage

The site is not subject to built form controls or heritage controls under the Orange LEP 2011.

2.3 Witton Place Structure Plan

A Structure Plan for the site has been prepared and is contained within the Urban Design Study. The Structure Plan outlines a framework for which future Planning Proposal's and Development Applications can be considered for the site. The site will cater to diversity of lot sizes, housing typologies and a high provision of open space that responds to the site-specific environmental and scenic opportunities and constraints.

The site has an area of 10.99 hectares which will cater to approximately 100 lots. A variety of lot sizes can be supported across the site to promote diversity in housing and meet a variety of housing demands in accordance with the OLHS. Larger lots (1,500m^2) are proposed along Cargo Road with sufficient lot depths to allow for future dwellings to have adequate setbacks from Cargo Road to minimise road impacts.

3 Planning Proposal

The Planning Proposal has been prepared in accordance with the Local Environmental Plan Making Guideline (NSW Government, August 2023), as it is structured as follows:

- Part 1 – Objectives and intended outcomes – a statement of the objectives of the proposed LEP.
- Part 2 – Explanation of provisions – an explanation of the provisions that are to be included in the proposed LEP.
- Part 3 – Justification of strategic and site-specific merit – justification of strategic and potential site-specific merit, outcomes, and the process for implementation.
- Part 4 – Maps – maps, where relevant, to identify the effect of the planning proposal and the area to which it applies.
- Part 5 – Community consultation – details of the community consultation that is to be undertaken on the planning proposal.
- Part 6 – Project timeline – project timeline to detail the anticipated timeframe for the LEP making process in accordance with the benchmarks in this guideline

3.1 Part 1 – Objectives and Intended Outcomes

Objective(s)

The objective of the Proposal is to amend the key planning controls in *Orange Local Environmental Plan 2011* (OLEP 2011) to enable the development of the subject site for urban residential use including an urban release overlay and suitable zoning and lot size for standard urban residential subdivision and removal of biodiversity overlays. The Proposal seeks to exclude the site from Complying Development to ensure that the site develops consistent with the desired future character of the area, given its scenic qualities.

Intended Outcome(s)

The intended outcomes of the Planning Proposal are:

(a) Rezone the land to facilitate residential development, and associated open space,

(b) Identify the site as an urban release area,

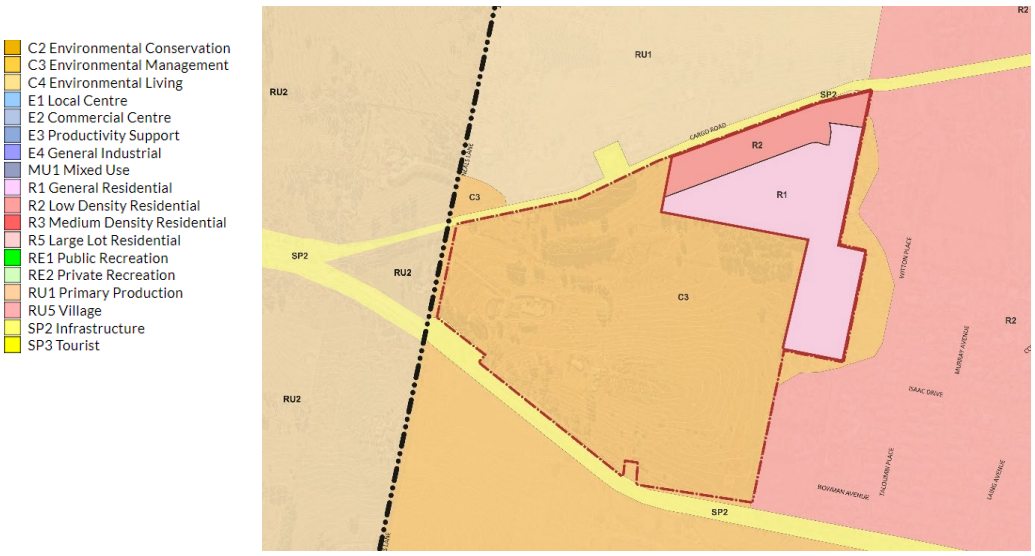
(c) Remove any inconsistencies in mapped biodiversity sites in accordance with the studies prepared for this proposal,

(d) Ensure any future development is consistent with the desired future character of the area.

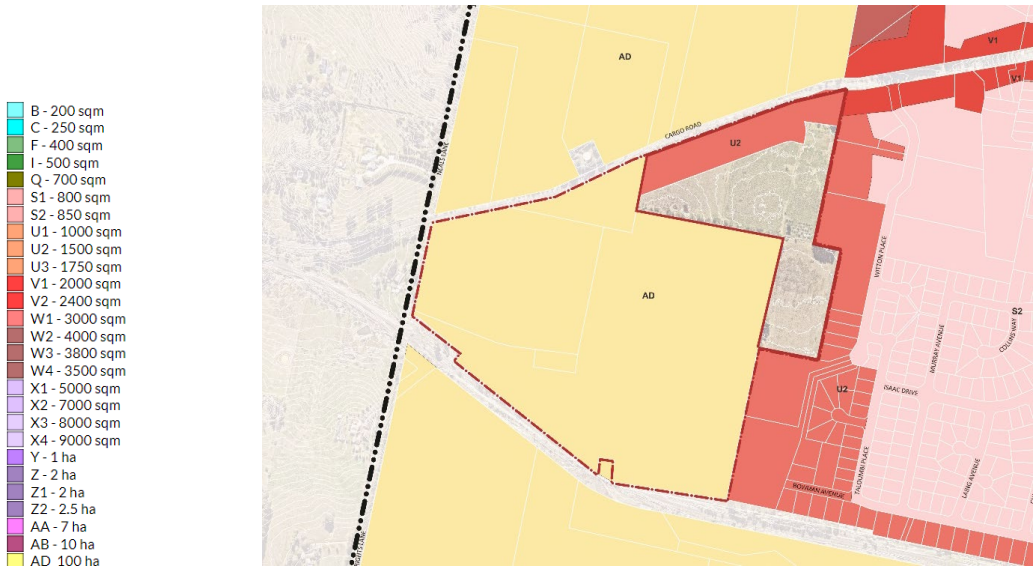
3.2 Part 2 – Explanation of Provisions

The Proposal seeks to amend the OLEP 2011 to facilitate the following:

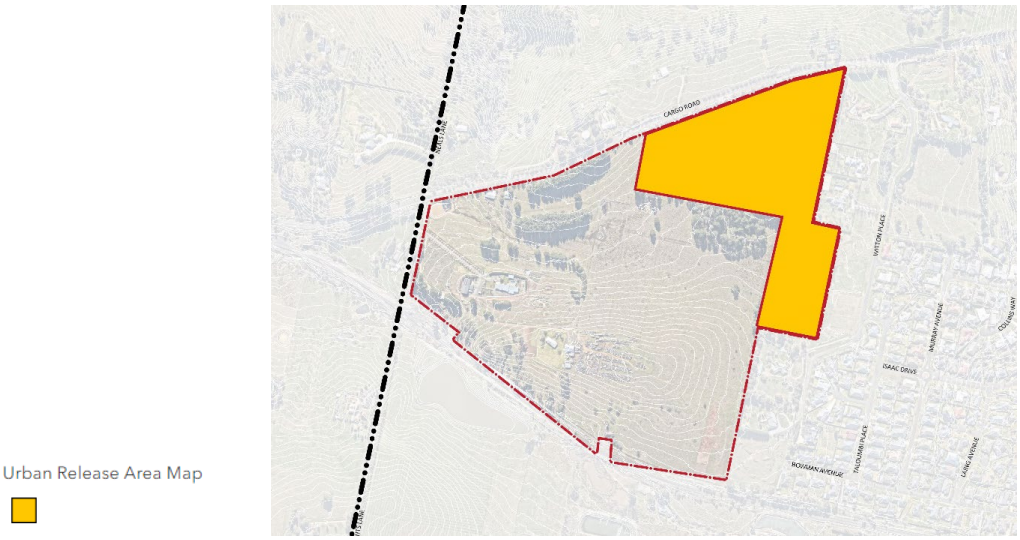
Rezone the land from part RU1 Primary Production, part Zone C3 Environmental Management to part R1 General Residential and art R2 Low Density Residential.



Amend the Minimum Lot Size from 100 hectares to 1,500m^2 for lots corresponding to the R2 Low Density Residential Zone, no MLS is proposed for the remainder of the site.



Add Urban Release Area (URA) overlay on a new map tile, so that Part 6 of the LEP will apply to the land. Clause 6.3 requires a site-specific Development Control Plan (DCP) to be prepared for the site before development consent can be granted for development of the land. In addition, this will allow for the site to be identified as a Bush Fire Planning - Urban Release Area.

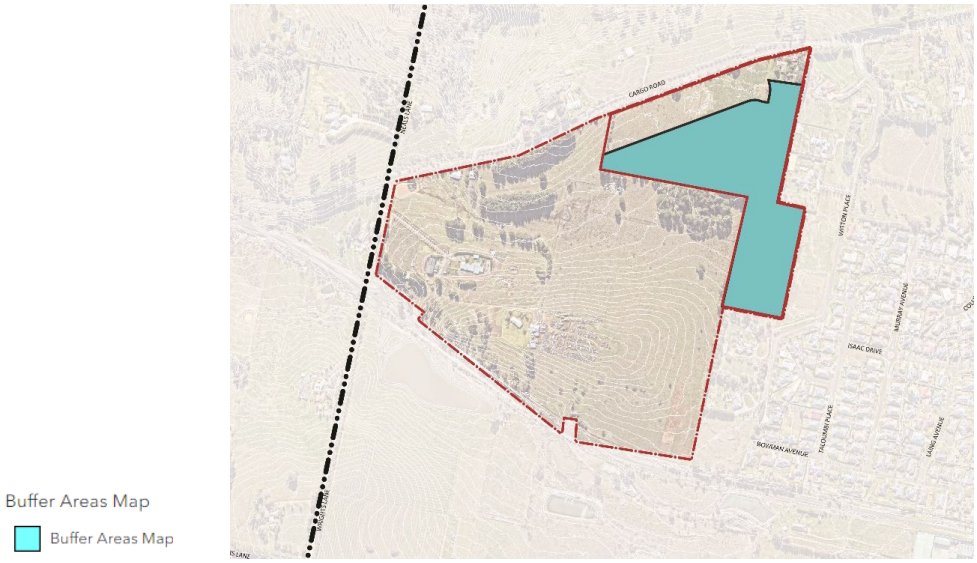


Remove the Terrestrial Biodiversity map overlay on in relation to the Stage 1 site and adjoining parcel (Lot 4 DP1099080) in accordance with the Flora and Fauna Assessment as there is limited/if any biodiversity value.



Add clause to Part 7 Additional Local Provisions to include the R1 General Residential zone as a buffer area and include a new map tile in the Buffer Zone Map. This will exclude the site from allowing Complying Development to occur, given its high value scenic qualities (as the entry into the City) and

location within the Molong Dam drinking water catchment. This also ensures that high quality-built form outcomes will arise consistent with the intent of the Structure Plan and site specific DCP given the unique design aspects of the site and the presentation of built form to the open space corridors. This will ensure any Development Applications lodged for the site comply with the site specific DCP controls in relation to the abovementioned considerations.



The intent of the clause would be consistent with Clause 7.15 Development in Shiralee Hilltop Park Buffer Area of the Orange Local Environmental Plan 2011.

3.3 Part 3 – Justification of Strategic and Site-Specific Merit

The Proposal has been assessed against the following Council Strategies, Policies and Guidelines, and the State Environmental Planning Policies and Ministerial Directions to demonstrate strategic alignment:

- Central West and Orana Regional Plan 2041 (NSW Government, 2022)
- Draft Blayney Cabonne Orange Sub-Regional Rural and Industrial Lands Strategy 2019 (Blayney Shire Council, Cabonne Shire Council and Orange City Council)
- Orange Community Strategic Plan 2022-2032 (Orange City Council)
- Orange Local Strategic Planning Statement (Orange City Council, 2020)
- Orange Local Housing Strategy (Orange City Council, 2022)
- State Environmental Planning Policies, and
- Ministerial Directions.

Section A – Need for the Planning Proposal

1. Is the planning proposal a result of an endorsed LSPS, strategic study or report?

The Orange Local Housing Strategy identifies:

(a) opportunities on existing undeveloped residentially zoned land (urban land release areas, areas for infill development and easily serviced areas),

(b) opportunities on future residential land,

(c) candidate areas for future housing, and

(d) land for investigation as candidate sites for new housing.

The site has been identified as part of a Candidate Area – short term (0-5 years). The Housing Strategy identifies that a Planning Proposal will be required to rezone and change the applicable planning provisions to accommodate future development of the Candidate Areas.

2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The Proposal is required to align the current OLEP 2011 zones and development standards with the identified objectives and outcomes of the OLHS and Structure Plan for the site. A site-specific Planning Proposal to amend the land use zones and development standards will facilitate the planned redevelopment of the site as a residential precinct.

SECTION B – RELATIONSHIP TO THE STRATEGIC PLANNING FRAMEWORK

3. Will the planning proposal give effect to the objectives and actions of the applicable regional or district plan or strategy (including any exhibited draft plans or strategies)?

Central West and Orana Regional Plan 2041

The *Central West and Orana Regional Plan 2041* was endorsed in December 2022 and envisioned the region to be healthy, connected and resilient, with a prosperous economy that is home to more than 325,000 people. Orange is one of the three regional cities in the region and services a broad population catchment. The amended proposal demonstrates consistency with the key objectives and strategies outlined in the Regional Plan, as summarised:

- Creating connected and healthy communities, by linking into existing infrastructure,
- Planning for resilient communities, through the design of the public domain by providing green infrastructure,
- Securing resilient region water resources, by minimising impact on water catchments through careful site design,
- Ensuring the site design is responsive to the scenic landscape and protects important views into and from the site,
- Providing well located housing that responds to future demand and population needs, and
- Providing diverse housing that improves the provision of housing affordability.

The Planning Proposal is consistent with the relevant objectives and strategies of the *Central West and Orana Regional Plan 2041* as demonstrated in Table 1.

Table 1 Central West and Orana Regional Plan 2041

Objective	Strategy	Consistency
Part 1 – Region-shaping investment		
1. Deliver the Parkes Special Activation Precinct and share its benefits across the region		The Regional Plan recognises that Orange is within 90 minutes drive of Parkes and there will be flow-on growth effects from the Parkes SAP/Inland Rail. The Proposal seeks to provide a diverse range of lot sizes and housing options to cater for the future house demand and demographic projections for the City. **The proposal is consistent with the relevant direction.**
2. Support the State's transition to Net Zero by 2050 and deliver the Central-West Orana Renewable Energy Zone	2.1 To prepare for the transition to Net Zero strategic and statutory planning should: • provide measures that will increase the energy efficiency of new and renovated buildings and subdivisions	The Proposal is supported by Urban Design Study and Structure Plan layout that responds to the sites environmental constraints providing for energy efficiency, layout and design that enhances sustainability of the precinct and the sustainable use of land. **The proposal is consistent with the relevant objective and strategy.**
3. Sustainably manage extractive resource land and growth the critical mineral sector		The site is outside the mapped/ known Mineral Resource Potential areas or buffer to existing extractive industries and largely outside the area with existing exploration licences due to proximity to the urban area of Orange. There is low chance of any impact.

Objective	Strategy	Consistency
		The proposal is consistent with the relevant objective and strategy.
Part 2 – A sustainable and resilient place		
5. Identify, protect and connect important environmental assets	5.2 Respond to biodiversity values when planning for new residential and employment development by: • identifying opportunities to integrate biodiversity values into new development • using buffers to separate or manage incompatible land uses • identifying HEV land at planning proposal stage through site investigation 5.3 Create biodiversity corridors, including riparian corridors, through strategic planning and in LEPs by: • identifying a biodiversity corridor network • preparing and validating biodiversity corridor mapping • reviewing land zonings on land where there are opportunities to protect high priority corridor areas • reserving links between areas of projected climate refugia.	The site is not identified as HEV land. The Preliminary Flora and Fauna Assessment for the site has noted that there are limited sites of native flora/fauna and has confirmed that the Pine Plantation has limited, if any biodiversity value. The Proposal is supported by an Urban Design Study and Structure Plan, designed through a landscape-led approach, which has identified any environmental assets on the site. An opportunities and constraints analysis has informed the layout so that environmental assets are protected by being included in open space corridors limiting the impact of any future development on these assets. **The proposal is consistent with the relevant objective and strategy.**
6. Support connected and healthy communities	6.1 Undertake public space needs analyses and develop public space strategies by: • exploring new public space opportunities and green infrastructure in accordance with the Government Architect NSW's Greener Places and Better Placed, Designing with	The subject site is located within 1 km walking distance of two local parks 1.5 hectares in size. One of which includes a small play space. The site is also located within 800m walking distance of a district park being the Ploughman Valley Wetlands.

Objective	Strategy	Consistency
	Country discussion paper, the Streets as Shared Spaces program and Everyone Can Play • considering the needs of future and changing populations • understand and manage potential noise impacts of play areas on existing and proposed surrounding residential areas • identifying opportunities to: ○ prioritise new and improved quality public space to areas of most need ○ Incorporate natural drainage features within public spaces and linking them with green infrastructure networks ○ improve walking and cycling connections to public space and preparing Active Transport Plans, where appropriate 1.2 Strategic planning and local plans should consider opportunities to: • ensure new residential areas provide sufficient public and open space and link to existing pedestrian and cycle networks • demonstrate how the quantity of, and access to, high quality and diverse existing public space is maintained, embellished and improved.	The Proposal includes a small parcel of open space which is suitably sited on flat land to allow for a play space and any required amenities, accessible to all residents. This ensures suitable recreation opportunities for residents if subsequent Planning Proposals within the Witton Place Candidate Area do not proceed. The open space layout has been informed by the Urban Design Study, which is consistent with the Government Architect's Guidelines, Everyone Can Play and Orange City Council's Play Strategy 2024. The Proposal is supported by a Planning Agreement for the dedication of open space to Council. **The proposal is consistent with the relevant objective and strategy.**
7. Plan for resilient places and communities	Strategy 7.1 Reducing the level of vulnerability and risk for communities will involve early consideration of natural hazards	The subject site and broader Candidate Area are identified on the draft Bush Fire Prone Land map. There is a small

Objective	Strategy	Consistency
	and avoidance and mitigation for both existing and new development areas. To achieve this strategic and local planning must: • ensure consistency with the applicable NSW policy, manual and/or guidelines • take a risk-based-approach that uses best available science in consultation with the NSW Government, emergency service providers, local emergency management committees and bush fire risk management committees • locate development away from areas of known high bushfire, salinity and flooding risk • ensure that mapping that identifies hazard affected areas, including bushfire and flooding, is kept up to date and used in decision-making. 1.3 Strategic planning and waste management strategies should align with the NSW Waste and Sustainable Materials Strategy 2041 and the NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs when planning for waste and resource recovery 1.4 Strategic planning and local plans should encourage: • energy efficient building design and practices that	portion of Category 1 Vegetation (the Pine Plantation) and Category 3 Grasslands. Secondary access to the site is capable of being provided for firefighting purposes off Cargo Road, subject to further consultation with the relevant agencies. The minimum Asset Protection Zone (APZ) applicable to the site is 25 metres for land adjoining the Pine Plantation, and 11 metres for land adjoining the grasslands. Residential land to the east and south-east is managed land. Council staff have advised that the removal of the Pine Plantation does not require approval. Removal of the Pine Plantation will reduce the APZ back to 11 metres for all southern boundaries of the site. Suitable re-planting of vegetation will be required in accordance with a landscape plan as agreed under the Planning Agreement. Any Development Applications for the subject site will be assessed according to Planning for Bush Fire Protection 2019 and will be reviewed by Rural Fire Service under Section 100B of the Rural Fires Act 1979. Council is preparing a site-specific Development Control Plan for the site that will align with the NSW Waste and Sustainable Materials Strategy

Objective	Strategy	Consistency
	respond to the natural environment	2041 and the NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs when planning for waste and resource recovery. **The proposal is consistent with the relevant objective and strategy.**

8. Secure resilient regional water resources	8.1 Strategic water and land use planning, at the regional and local scale, must consider opportunities to:
	• improve the reliability, quality and security of the region's water supply by considering the impact of the following on water security:
	  ○ climate variability and change
	  ○ planned future growth
	  ○ integrated water cycle management and water sensitive urban design
	  ○ the needs of the natural environment
	• locate, design, construct and manage new developments to minimise impacts on water catchments, including downstream impacts and groundwater resources
	• improve provision for stormwater management and the application of green infrastructure
	• identify and consider surface and groundwater
		The subject site and Candidate Area is identified as groundwater vulnerable through the Orange Local Environmental Plan 2011 and has been identified at a minimum depth of 8 metres on the site. Any future development of the land will be required to address any direct or indirect impacts.
		
		The site contains a headwater flow path, known as a first order stream under the Strahler stream ordering system. This stream forms part of the mid-Macquarie tributaries.
		
		The subject site and broader Candidate Area are located within Molong Drinking Water Catchment. The Cabonne Settlement Strategy (2021) notes that development within the Catchment should be minimised unless high levels of water management demonstrate that impacts can be avoided or mitigated.
		
		Basins/Wetlands for storage and treatment will be provided within the open space network and in accordance with the Structure Plan and Water and Sewer Servicing Strategy to

Objective	Strategy	Consistency
	drinking water catchments and storages • limit land uses that can harm surface and groundwater quality or lead to its overuse • consider water needs and sources early in planning and development processes.	ensure water quality maintained/improved. **The proposal is consistent with the relevant objective and strategy.**
9. Ensure site selection and design embraces and respects the region's landscapes, character and cultural heritage	9.1 Strategic and local planning will strengthen the amenity in centres across the region by: • identifying and protecting scenic and cultural landscapes • providing guidance for new development to ensure that views of scenic and cultural landscapes, particularly views from the public realm, are protected • elevating the importance of design quality and design excellence 1.5 Use strategic planning and local plans to recognise and enhance local character including through local character statements in local plans that accord with the NSW Government's Local Character and Place Guideline 1.6 Use strategic planning and local plans to consider opportunities to apply the seven urban design strategies for regional NSW when planning for: • public space in centres, including main streets	The site is located on the western entry into the City, which is currently characterised by planted rows of fruit, cedar and oak trees, which provide a buffer from viewing into and across the site. The site is identified as a Scenic Protection Zone under Council's Development Control Plan due to the height and scenic rural surrounds of the site. Currently, larger lots present along the ridgeline of Witton Place creating a visual buffer to any development that occurs to the west. Key views into the site are located at Neals Lane and from Witton Place and Bowan Avenue. Significant views to Gaanha Bula (Mount Canobolas) are located within the site, which is a key component of Orange's first nations cultural landscape. The Structure Plan accounts for the scenic qualities of the site and proposes a carefully considered layout. In addition to this, Council has requested the site be identified as a Buffer

Objective	Strategy	Consistency
	• development in both existing and new neighbourhoods	Area within the OLEP 2011 to ensure that development quality is commensurate with the scenic values. **The proposal is consistent with the relevant objective and strategy.**
Part 3 – People, centres, housing and communities		
11. Strengthen Bathurst, Dubbo and Orange as innovative and progressive regional cities		The Proposal has resulted from the identification of the subject site within the OLHS. The OLHS has reviewed key drivers of population change and determined appropriate locations for growth. The Proposal provides a short-term growth area for urban residential uses within 4 km of the CBD and is well suited to meet local demand. **The proposal is consistent with the relevant objective.**
12. Sustain a network of healthy and prosperous centres	11.1 Use economic development and local housing strategies to reinforce the regional scale functions of each regional city by: • ensuring there is sufficient capacity to meet ongoing housing and employment needs.	The Orange Local Government Area has limited greenfield land that is viable in supporting the growth of the City, and the sustainable use of greenfield land.
13. Provide well located housing options to meet demand	13.1 To ensure an adequate and timely supply of housing, in the right locations, strategic and local planning should: • respond to environmental, employment and investment considerations, and population dynamics	With an estimated population of 44,244 (Profile.Id, 2023) and projected population growth of 10,800 people between 2016 and 2041, representing an increase of 26%, there is a growing need to ensure that future housing development

Objective	Strategy	Consistency
	when identifying new housing opportunities • consider how proposed release areas could interact with longer term residential precincts • provide new housing capacity where it can use existing infrastructure capacity or support the timely delivery of new infrastructure. • Identify a pipeline of housing supply that meets community needs and provides appropriate opportunities for growth. 13.3 Use strategic planning and local plans to facilitate a diversity of housing in urban areas by: • creating flexible and feasible planning controls, including a greater mix of housing in new release areas • aligning infrastructure and service provision to housing supply needs	utilises land in an efficient and effective manner. The Witton Place Candidate Area is a critical piece of land in achieving the LGAs housing targets. The identification of the site within the OLHS was due to the Candidates Area proximity to existing residential land uses, the CBD and the ability to service the land. The yield resulting from the Structure Plan layout is approximately 100 lots for the subject site. The OLHS identified the Candidate Area as a short term site (0-5 years) with a potential yield of 8/ha equating to 280 lots within low density, rural residential zones. The yield identified in the strategy was estimated based on high-level constraints analysis across all Candidate Areas within the Local Government Area and provides a basis for ongoing infrastructure planning. These estimates are to be tested against an urban design analysis of the site to determine the highest and best use of the land. The projected yield resulting from the Structure Plan layout across the whole Candidate Area may not vary significantly from the overall
14. Plan for diverse, affordable, resilient and inclusive housing	14.1 To improve housing diversity, strategic and local planning should: • allow a diversity of housing, including affordable housing, student housing, shop top housing, more dense housing types and housing choices for seniors close to existing services, and on land free from hazards • improve certainty of development outcomes	

Objective	Strategy	Consistency
	and streamline development processes. 14.2 Plan for a range of sustainable housing choices in strategic planning and local plans including: • a diversity of housing types and lot sizes, through appropriate development standards, including minimum lot sizes, minimum frontage and floor space ratio • housing that is more appropriate for seniors, including low-care accommodation • considering development incentives or reduced contributions to boost construction of secondary dwellings • innovative solutions for older people, multigeneration families, group housing, people with special needs or people from different cultural backgrounds • sustainable housing solutions that can reduce costs and environmental impacts of household operations.	yield identified in the OHLS due to larger lot required to maintain the entry into the city and as buffers from the railway line, in addition to a significant amount of open space required to manage potential scenic impacts, and potential impacts of the watercourses through the site. The OLHS identifies that 86% of housing stock in the Orange Local Government Area is single freestanding dwellings. Households made up of either couples with no children or lone person households are expected to increase from 53% (2016) to 59% (2041). The number of households with children is expected to decrease from 41% (2016) to 37% (2041). This demonstrated an increase demand for the delivery of smaller dwellings and a greater need for housing diversity within the City. Housing diversity is also identified with the OLHS as a critical component in influencing housing affordability. The Proposal has been amended to include the R1 General Residential zone and remove the minimum lots size for this zone. This is supported by the site-specific Structure Plan which identifies the capability of the site to cater for an increased yield and provide flexibility for a greater mix of lot

Objective	Strategy	Consistency
		sizes and housing types within the site. This aligns with the projected population growth and demographic analysis within the OLHS. **The proposal is consistent with the relevant objective and strategy.**
Part 4 – Prosperity, productivity and innovation		
19. Protect agricultural production values and promote agricultural innovation, sustainability and value-add opportunities.	19.1 Use strategic planning and local plans to: • identify and enable emerging opportunities for higher-value agriculture, including agriculture innovation and value-add opportunities such as on-farm processing that includes provisions for intensification of industry, farm gate sales and small-scale value adding manufacturing that advantages the differentiation of the local produce • protect agricultural land and industries from land use conflicts and fragmentation • maintain and protect agricultural land and industries from land use conflicts and fragmentation, especially those lands identified as Class 1-3 using the NSW land and capability mapping, biophysical	Historically, the area is known for apple orcharding and agricultural use including pasture improvement and livestock grazing. However, the area otherwise known as Ploughmans Valley has been highly fragmented through historic subdivision and the creation of concessional allotments, and rural residential subdivision. The Candidate Area contains 5 lots of varying sizes up to a maximum of 21 hectares. The site is subject to a minimum lot size of 100 hectares, with the provision for lots equal to or greater than 25 hectares can be approved for the purposes intensive plant agriculture under clause 4.2B of the OLEP 2011. The Candidate Area is enclosed/isolated by the rail line/Cargo Road/Neals Lane and urban development to the east such that it is unlikely to have

Objective	Strategy	Consistency
	strategic agricultural land, those currently developed for irrigation, or other special use lands that support specialised agricultural industries 19.2 Strategic and local planning should maintain and protect the productive capacity of agricultural land in the region. 19.3 Use strategic and local planning to consider the quality of the land for agriculture and the scarcity of productive agricultural land in the region when making decisions regarding: • the permissibility of compatible non-agricultural land uses in rural zones, without compromising agricultural production • minimum lot sizes, standards for dwellings and limiting land fragmentation • farm boundary adjustments and subdivisions to create a lot for primary production • identifying suitable areas for smaller agricultural holdings for activities such as horticulture, whether these areas are suitable for inclusion in the primary production small lot zone, and ensure they are not developed for rural residential use.	sufficient area for or be able to sustain intensive agriculture due to current ownership patterns and land use conflict. There is little potential for the Site to consolidate with adjacent farmland to create a viable farm size. Due to the above-mentioned constraints the site no longer presents an opportunity for viable primary production purposes. The subject site and Candidate Area is located within the Towac Soil Landscape. Soil in the landscape is located on undulating to rolling low hills. The soil is derived from the ancient volcanic complex of Gaanha Bula (Mount Canobolas) and basalt flows which have been separated by layers of volcanic ash. Basalts are alkaline olivines, with trachytes and come shales and slats. The subject site and Candidate Area is identified along a narrow band of Biophysical Strategic Agricultural Land (BSAL). A portion of band to the North has been developed for residential purposes and the main concentration of BSAL land is located to the south of the urban area of Orange. The focus of protecting BSAL land within Orange is concentrated to the south of the Orange LGA. During the scoping phase, the Department of Primary

Objective	Strategy	Consistency
		Industries and Regional Development provided a submission (15/11/2022) that notes the Site is mapped as BSAL land noting the importance of this land to the economy. The Department of Primary Industries and Regional Development notes there are inconsistencies or competing requirements between and within Council's adopted Rural and Industrial land use strategies that seek to protect agricultural land but also identify the Candidate Area for Orange's growth in the short-term. The primary concern appears to be that consumption of higher quality agricultural land should only be supported where there is a clear strategic direction that it has a higher and better use for urban growth. The Department of Primary Industries and Regional Development did not support the current Proposal but stated they would be happy to review this position once Council's Housing Strategy was endorsed by the NSW Government. However, discussion with Department of Planning, Housing and Infrastructure confirmed that they are no longer endorsing local plans.

Objective	Strategy	Consistency
		The proposal is inconsistent with the relevant objective and strategy; however, the inconsistency has been justified as abovementioned.

4. Is the planning proposal consistent with a council local strategic planning statement (LSPS) that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?

Orange Local Strategic Planning Statement (September 2020)

The Orange Local Strategic Planning Statement (LSPS) provides a 20-year vision for land use planning in the Orange Local Government Area and outlines how growth and change will be managed. The amended proposal demonstrates consistency with the Planning Priorities, as outlined:

- Supporting the delivery of new homes in residential release areas,
- Providing a range of public domain spaces that foster a culturally rich and connected community,
- Provides for diverse housing choices and opportunities to meet the projected demographic needs of the community.

The LSPS contains 19 Planning Priorities to achieve the 20-year visions for Orange, along with associated actions. **Table 2** provides an assessment of the Planning Proposal against the relevant LSPS priorities.

Table 2 Orange Local Strategy Planning Statement

Planning Priority	Consistency
Planning Priority 2: Support the delivery of new homes in residential release areas, including North Orange and Shiralee, and increase housing options in existing urban areas.	The site is identified as a residential release area (Candidate Area) within the OHLS. The Proposal identifies the site as an Urban Release Area with the capacity to deliver approximately 100 dwellings within the subject site. **The proposal is consistent with the relevant Planning Priority.**
Planning Priority 3: Provide a range of facilities and services to meet community needs, and foster a culturally rich, creative and socially connected Orange community.	The subject site proposes a portion of open space as identified in the Structure Plan which is suitably sited on flat land to allow for a play space and amenities, and accessible to all residents. This ensures suitable recreation opportunities to residents if subsequent Planning Proposals within the Witton Place Candidate Area do not proceed. This has been informed by the Structure Plan for the Witton Place Candidate Area. In addition, the Transport Assessment identifies the extension of the 1.5m shared path along Cargo Road to facilitate an ongoing connection to the adjoining suburb and the Orange CBD. The Structure Plan proposes suitable street widths to provide internal connectivity.

Planning Priority	Consistency
	The proposal is consistent with the relevant objective and strategy.
Planning Priority 4: Provide diverse housing choices and opportunities to meet changing demographics and population needs, with housing growth in the right locations.	The R1 General Residential zone permits a range of housing forms. The Structure Plan supporting the Proposal facilitates housing choice by identifying opportunities for low density, medium density housing within the site. **The proposal is consistent with the relevant objective and strategy.**
Planning Priority 6: Provide recreational opportunities to meet the needs of residents of, and visitors to, Orange.	The existing and proposed open space network provides a range of recreational opportunities to meet the needs of the residents on the site and the adjoining suburbs. Residents of Orange and visitors to the City will also be able to enjoy these spaces. **The proposal is consistent with the relevant objective and strategy.**
Planning Priority 10: Improve access to, from and within Orange, and encourage active transport.	The Structure Plan indicates a hierarchy of street typologies that will cater to active transport to and from the site connecting into the existing network. The Site is also located 1 km from the popular Wetlands loop. **The proposal is consistent with the relevant objective and strategy.**

5. Is the planning proposal consistent with any other applicable State and regional studies or strategies?

Orange Local Housing Strategy (July 2022)

The OLHS demonstrates a critical mismatch between the City's housing stock and its dominant modes of housing investment and capitalisation on the one hand, and the community's actual housing needs and capacity to pay on the other. This is evidenced by a substantial and growing "housing affordability gap" and an over-reliance on detached 3-4 bedroom dwellings in new market-based housing provision. To date, Council's efforts to encourage private developers to provide diverse and affordable housing within their projects have achieved only moderate success.

The OLHS identifies that 86% of housing stock in the Orange Local Government Area is single freestanding dwellings. Households made up of either couples with no children or lone person households are expected to increase from 53% (2016) to 59% (2041). The number of households with children is expected to decrease from 41% (2016) to 37% (2041). This demonstrated an increased demand for the delivery of smaller dwellings and a greater need for housing diversity within the City. Housing diversity is also identified as a critical component in influencing housing affordability.

The Orange Local Government Area has limited greenfield land that is viable in supporting the growth of the City, and the sustainable use of greenfield land continues to be one of the key challenges faced within the LGA. The OLHS targets concentrated sites to ensure the growth is

sustainable and can be feasibly serviced with roads, sewer and water. This also facilitates good connections to employment, education, health and recreation opportunities.

The Proposal has resulted from the identification of the subject site within the OLHS. The site forms a portion of the Witton Place Candidate Area identified in the OLHS as a short-term site (0-5 years) for growth.

The OLHS identified the Candidate Area with a potential yield of 8/ha equating to 280 lots within low density, rural residential zones. The yield identified in the strategy was estimated based on high-level constraints analysis across all Candidate Areas within the Local Government Area and provides a basis for ongoing infrastructure planning. These estimates need to be tested against site specific constraints and opportunities to determine the highest and best use of the land. The projected yield resulting from the Structure Plan layout across the whole Candidate Area will not vary significantly from the overall yield identified in the OHLS due to larger lots required to maintain the entry into the city and as buffers from the railway line, a significant amount of open space to manage scenic and environmental constraints.

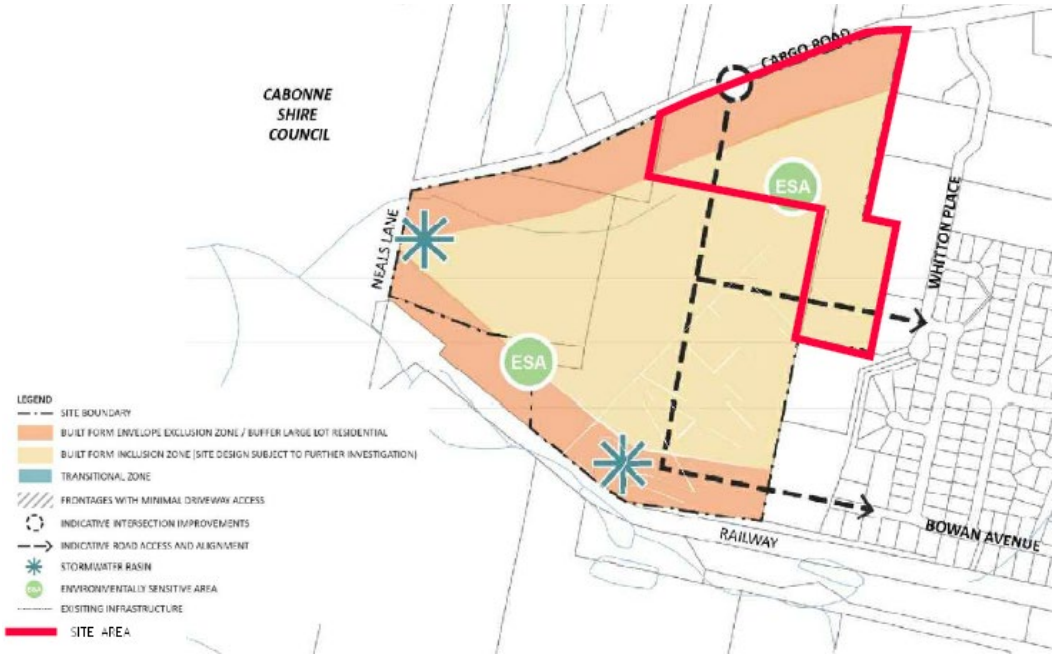


Figure 10 Witton Place Candidate Area

The Department of Planning, Housing and Infrastructure have advised Council that they are no longer endorsing all land use strategies. The Department has had the opportunity to comment on the Strategy and supported Council through its development.

The Planning Proposal is consistent with the relevant objectives and strategies of the OLHS as demonstrated in **Table 3**.

Table 3 Orange Local Housing Strategy

Housing Priority	Consistency
1. Coordinate services and community infrastructure to facilitate housing growth in appropriate locations: Ensure new housing development can be efficiently and effectively serviced by infrastructure suitable to the location and is unconstrained.	The Planning Proposal is supported by a Water and Sewer Servicing Strategy and Addendum which outlines that the site can be serviced with a mix of existing and new infrastructure. The Proposal is being prepared consistent with the identified timeframes in the OLHS due to the limited constraints for servicing. **The proposal is consistent with the relevant Priority.**
2. Increase housing supply diversity and choice to meet populations needs: Ensure a wide range of housing can be provided to meet the social and economic needs of the changing demographics of the City.	The R1 General Residential zone permits a range of housing forms. The Structure Plan supporting the Planning Proposal facilitates housing choice by identifying opportunities for low density, medium density housing within the site. Land zoned R1 will not have a Minimum Lot Size to allow for a mix of lot sizes and limit any future spot rezonings on the subject site. **The proposal is consistent with the relevant Priority.**
3. Facilitate infill opportunities for housing near jobs and service. Identify suitable areas for increased densities which are strategically located close to or well connected to existing and future services such as commercial and employment centres and transport to make more effective use of existing community infrastructure and facilities.	The subject site is located 4 km from the Orange CBD and is currently serviced via a bus network that terminates in the CBD. The site will also be connected into the existing footpath network which provides shared paths and pathways that link to local primary and high schools, an extensive open space network, playgrounds, the CBD and other commercial areas. The site is approximately a 3-4 minute drive to the CBD and a 10 minute drive to the Hospital. **The proposal is consistent with the relevant Priority.**
4. Support the supply of affordable housing. Encourage the development of affordable housing including affordable rental housing to meet the needs of medium and low income earners and those affected by housing stress.	The subject site does not propose any provisions for affordable housing. Through the provision of the R1 General Residential zone and no Minimum Lot Size for lots subject to the R1 zone, it is anticipated that through varying lot sizes and housing typologies the site will assist in increasing housing affordability. The yield also provides the opportunity for Community Housing Providers to obtain lot/s or housing product for the purpose of affordable housing. **The proposal is consistent with the relevant Priority.**
5. Facilitate and guide housing design, creativity and innovation: Encourage development to facilitate and guide housing design and innovation to enhance resident character and amenity.	The Structure Plan has been designed in accordance with an opportunities and constraints analysis that identified the scenic qualities of the site. Council has also requested the R1 General Residential Zone be identified as a Buffer Area within OLEP 2011 to ensure that development quality is commensurate with the scenic values, and desired future character for the area in accordance with the site specific Development Control Plan.

Housing Priority	Consistency
	The proposal is consistent with the relevant objective and strategy.
Ensure water security for the future: Manage drought response, uncertainty and impacts of climate change, and implement long-term planning to ensure cities and villages maintain water security. Protect the local environment and scenic landscapes: Encourage residential development which protects scenic amenity and ensures that growth in the City occurs in a sustainable way.	The Proposal has been amended to increase the potential yield for the subject site. However, this is noting that the projected yield for the whole Candidate Area may not vary significantly from the overall yield identified in the OHLS due to larger lots required to maintain the entry into the city and as buffers from the railway line. Therefore, the Proposal remains consistent with the estimated yield in the Strategy and does not have any further impact on water security for the City. The site forms part of Molong Creek catchment, within the mid-Macquarie tributaries and is located within Molong Drinking Water Catchment. The Cabonne Settlement Strategy (2021) notes that development within the Catchment should be minimised unless high levels of water management demonstrate that impacts can be avoided or mitigated. Basins/Wetlands for storage and treatment will be provided within the open space network and in accordance with the Structure Plan and Water and Sewer Servicing Strategy to manage post development water quality. **The proposal is consistent with the relevant objective and strategy.**

Draft Blayney, Orange and Cabonne Subregional Rural and Industrial Lands Strategy (2019-2036)

This Subregional Strategy relates primarily to rural and industrial zoned land across the combined Local Government Areas (LGAs) of Orange, Cabonne and Blayney.

Sections 2 and 3 of the *Subregional Strategy* provide the rural lands strategies and actions. It includes several relevant aims/objectives including:

- Promote and protect sustainable agriculture
- Support rural economic development
- Rural tourism
- Recognise and manage development on Mt Canobolas
- Protect environmental values and manage threats
- Manage the rural-urban interface

The Site includes a small pocket of Zone RU1 Primary Production land in the north-eastern corner near Cargo Road but is otherwise largely within Zone C3 Environment Management.

The key recommendations include:

- A3 – Prioritise agriculture and associated economic development over rural lifestyle [not urban] development;
- A4 – Reduce Long Term Fragmentation of Agricultural Land;
- B1 – Recognise the value of managing contested landscapes of Mt Canobolas across rural living, agriculture, the wine industry, tourism and environmental resources investigating options to better manage competing land uses;
- B2 – Identify a range of land use planning controls to manage the Mt Canobolas landscape;
- B3 – Limit mining activity on Important Agricultural Land;
- E1 – Manage incompatible land use activities on the urban fringe of urban areas;
- G1 – Protect the integrity of the drinking water catchment;
- G2 – Protect biodiversity.

It acknowledges that the current zoning of the site relates to protection of the drinking water catchment but states that local provisions are more effective at this protection than zoning. The subject site is located within the Towac Soil Landscape. Soil in the landscape is located on undulating to rolling low hills. The soil is derived from the ancient volcanic complex of Gaanha Bula (Mount Canobolas) and basalt flows which have been separated by layers of volcanic ash. Basalts are alkaline olivines, with trachytes and some shales and slats.

The subject site and Candidate Area is identified along a narrow band of Biophysical Strategic Agricultural Land (BSAL). A portion of band to North has been developed for residential purposes and the main concentration of BSAL land is located to the south of the urban area of Orange. The focus of protecting Biophysical Strategic Agricultural Land within Orange is concentrated to the South of the Orange LGA where there are currently numerous primary producers located.

During the scoping phase, Department of Primary Industries and Regional Development has provided a submission dated 15/11/2022 that notes the Site is mapped as BSAL land noting the importance of this land to the economy.

The Department of Primary Industries and Regional Development notes there are inconsistencies or competing requirements between and within Council's adopted land use strategies that seek to protect agricultural land but also identify the Candidate Area for Orange's growth in the short-term. The Department of Primary Industries and Regional Development's primary concern appears to be that consumption of higher quality agricultural land should only be supported where there is a clear strategic direction that it has a higher and better use for urban growth.

The Department of Primary Industries and Regional Development did not support the current Proposal but stated they would be happy to review this position once Council's Housing Strategy was endorsed by the NSW Government. The Department of Planning, Housing and Infrastructure have stated they are no longer endorsing local strategies.

The Candidate Area contains 5 lots of varying sizes up to a maximum of 21 hectares, three of which have existing dwellings. The site is subject to a minimum lot size of 100 hectares, with the provision

that rural-residential subdivision can be approved on a lot no less than 25 hectares for intensive plant agriculture. The lots are fragmented in ownership and no longer present an opportunity for viable primary production purposes.

The Candidate Area is enclosed/isolated by the rail line/Cargo Road/Neals Lane and urban development to the east such that it is unlikely to have sufficient area for or be able to sustain intensive agriculture and this could increase land use conflicts.

The site itself is only 11ha, of which, a significantly lower portion would be suited to intensive agriculture. The site is immediately adjacent to the urban edge of Orange and land use conflicts would likely be high if intensive agriculture were to proceed. There is little potential for the site to consolidate with adjacent farmland to create a viable farm size.

Whilst inconsistent, the Proposal is in an area that is highly fragmented in ownership and isolated by road/rail from larger agricultural holdings, so it has limited agricultural potential and good buffers to avoid/minimise land use conflicts with adjacent agricultural lands (particularly those to the south of the railway line in BSAL lands).

6. Is the planning proposal consistent with the applicable SEPPs?

Table 4 State Environmental Planning Policies

SEPP	Consistency
SEPP (Primary Production) 2021	The proposal is inconsistent; however, this has been addressed in the abovementioned. The site is identified in the OLHS and given the prevailing context of the site the inconsistency is justified.
SEPP (Housing) 2021	The proposal is consistent with the 3 Principles of the Policy and can comply with the requirements of the SEPP (Housing) 2021 where required.
SEPP (Exempt and Complying Development Codes) 2008	The proposal is consistent. Council has requested the site be identified as a Buffer Area within Council's LEP to ensure that development quality is commensurate with the scenic values, and desired future character for the area in accordance with the site specific DCP.
SEPP (Biodiversity and Conservation) 2021	The proposal is consistent, as supported by the Preliminary Flora and Fauna Assessment, as summarised: *An assessment of the impacts of subdivision was undertaken by site inspection and desktop study. The subject site comprises of predominately introduced pasture grasses and broadleaved weeds with minor native grasses, herbs, and rushes.* *Faunal habitat comprised limited nesting areas due to the lack of significant trees and understory. The conifer windbreak and apple trees may provide for fauna that do not require hollows with nesting*

SEPP	Consistency
	sites. Farm dams and tall grasses provide shelter and foraging habitat for fauna. No threatened species were identified on the subject site. *An area of native rushes, tussock grass, and herb located at the natural drainage depressions to the south, on the lower slopes to the west and at the horse yards will require removal. No other native vegetation will be removed.* *The development is not expected to have significant impact on the long-term survival of threatened species and communities in the South Eastern Highlands Bioregion.* *Most of the site is modified grassland with limited trees and ground cover dominated by introduced pasture species. Vegetation on the site has been heavily modified through historic clearing and agricultural practices. The site was an apple orchard from the 1960s with a remnant stand of fruit trees on the eastern boundary near the centre of the Site.* The Planning Proposal seeks to update the Terrestrial Biodiversity mapping to remove the ESA mapped area that applies to the site and immediate adjacent area. Council has indicated that the removal of the Pine Plantation is appropriate and replanting of native species is to be undertaken in accordance with the Planning Agreement. The other Terrestrial Biodiversity mapped areas along the rail corridor (outside the site and within the remainder of the Candidate Area) includes larger eucalypt species.
SEPP (Resilience and Hazards) 2021	Chapter 4 Remediation of land is the only applicable portion of the SEPP applicable to the site. The Proposal can comply and is considered consistent.
SEPP (Transport and Infrastructure) 2021	The Proposal is capable of complying. There has been extensive consultation and provision of updated Transport Assessment to Council and TfNSW to support the proposed connection to Cargo Road.
SEPP (Sustainable Buildings) 2022	Will be addressed by future dwelling applications, can comply.

7. Is the planning proposal consistent with the applicable Ministerial Directions (Section 9.1 Directions) or key government priority?

Table 5 Section 9.1 Directions

Section 9.1 Directions		Consistency
Focus Area 1: Planning Systems		
1.1	Implementation of Regional Plans (1/03/22)	**Consistent.** The *Central West and Orana Regional Plan 2041* is addressed abovementioned. The Proposal is consistent with the Regional Plan but requests minor variation by balancing (competing objectives) for the protection of agricultural land with the need for sustainable urban growth. This is resolved by Council's adopted *Housing Strategy* identifying the Site's highest and best use is for urban growth whilst minimising agricultural impacts.
1.2	Development of Aboriginal Land Council Land	**Not Applicable.** Applies to Central Coast only.
1.3	Approval and Referral Requirements	**Not Applicable.** No change in concurrence, consultation or referral of applications proposed.
1.4	Site Specific Provisions	**Consistent.** The Planning Proposal does not propose any unnecessarily restrictive site-specific planning controls. The proposed zone will facilitate residential development.
1.4A	Exclusion of Development Standards from Variation	**Consistent.** The Planning Proposal does not propose to exclude any development standards.
Focus Area 1: Planning Systems - Place Based		
1.5	Parramatta Road Corridor Urban Trans. Strategy	**Not Applicable.**
1.6	Implementation of NW Priority Growth Area LUIIP	**Not Applicable.**
1.7	Implementation of Greater Parramatta Priority Growth Area LUIIP	**Not Applicable.**
1.8	Implementation of Wilton Priority Growth Area ILUIIP	**Not Applicable.**

Section 9.1 Directions		Consistency
1.9	Implementation of Glenfield to Macarthur Urban Renewal Corridor	**Not Applicable.**
1.10	Implementation of the Western Sydney Aerotropolis Plan	**Not Applicable.**
1.11	Implementation of Bayside West Precinct 2036 Plan	**Not Applicable.**
1.12	Implementation of Planning Principles for the Cooks Cove Precinct	**Not Applicable.**
1.13	Implementation of St LeonaRoads and Crows Nest 2036 Plan	**Not Applicable.**
1.14	Implementation of Greater Macarthur 2040	**Not Applicable.**
1.15	Implementation of the Pyrmont Peninsula Place Strategy	**Not Applicable.**
1.16	North West Rail Link Corridor Strategy	**Not Applicable.**
1.17	Implementation of the Bays West Place Strategy	**Not Applicable.**
Focus Area 3: Biodiversity and Conservation		
3.1	Conservation Zones	**Inconsistency justified.** Most of the site is currently zoned C3 Environmental Management. However, the Preliminary Flora and Fauna Assessment undertaken for the Planning Proposal identifies that the land is ecologically degraded and contains limited native vegetation. No threatened species or ecologically endangered communities have been identified on the land. The land has not been found to be environmentally sensitive and is not currently used for conservation purposes. The proposed rezoning will not result in the loss of environmentally sensitive areas.
3.2	Heritage Conservation	**Consistent.** No known indigenous or non-indigenous heritage on the site. An AHIMS search is provided and identified no known

Section 9.1 Directions		Consistency
		sites. The land has a lower risk of impact on archaeology due to its location and historic land disturbance.
3.3	Sydney Drinking Water Catchments	**Not Applicable.**
3.4	Application of C2 and C3 Zones and Environmental Overlays	**Not Applicable.** Only applicable to North Coast where these zones were deferred.
3.5	Recreation Vehicle Areas	**Not Applicable.**
3.6	Strategic Conservation Planning	**Not Applicable.** The site is not identified as 'avoided land' or a 'strategic conservation area' under *SEPP (Biodiversity and Conservation) 2021*.
3.7	Public Bushland	**Not Applicable.** Not an identified LGA (Sydney Metro only)
3.8	Willandra Lakes Region	**Not Applicable.**
3.9	Sydney Harbour Foreshores and Waterways Area	**Not Applicable.**
3.10	Water Catchment Protection	**Not Applicable.** Site not in a regulated catchment (excluding Sydney DWC) under *SEPP (Biodiversity and Conservation) 2021*.
Focus Area 4: Resilience and Hazards		
4.1	Flooding	**Not Applicable.** The site is not mapped as being flood prone land and is not in sufficient proximity or level to be affected by nearby watercourses. The site has good slope and the draft road layout for drainage can be addressed during the Development Application phase.
4.2	Coastal Management	**Not Applicable.**
4.3	Planning for Bushfire Protection	**Consistent.** The site is identified as Category 1 Vegetation and Category 3 Grasslands. The site is capable of complying with Planning for Bush Fire Protection at the subdivision stage.
4.4	Remediation of Contaminated Land	**Consistent.** The Preliminary Contamination Assessment indicated that remediation may be required. Further studies will be prepared to support the future residential use of the land.

Section 9.1 Directions		Consistency
4.5	Acid Sulfate Soils	**Not Applicable.** Land NOT mapped as acid sulfate prone land.
4.6	Mine Subsidence and Unstable Land	**Not Applicable.** Land NOT within a mine subsidence district or unstable land.
Focus Area 5: Transport and Infrastructure		
5.1	Integrating Land Use and Transport	**Consistent.** The Proposal is a logical extension of the existing Orange urban area and its transport and infrastructure in reasonable proximity to a reasonable level of facilities and services. The Structure Plan prepared in support of the Planning Proposal provides opportunities for the bus network to be extended through the site, as well as the incorporation of active transport, with walking and cycling paths, to increase transport options and encourage a reduction in the number of car trips.
5.2	Reserving Land for Public Purposes	**Consistent.** Future roads and public parks to be dedicated to Council as required.
5.3	Development Near Regulated Airports and Defence Airfields	**Not Applicable.** The land is not near Orange Regional Airport.
5.4	Shooting Ranges	**Not Applicable.** There are no known rifle ranges in or near any part of the Site or Candidate Area.
Focus Area 6: Housing		
6.1	Residential Zones	**Consistent.** The site is a proposed residential zone for residential development. The Structure Plan in support of the Proposal demonstrated a diversity in housing types that will be available to Orange population.
6.2	Caravan Parks and Manufactured Home Estates	**Consistent.** The proposal does not involve any caravan or manufactured home estates.
Focus Area 7: Industry and Employment		
7.1	Employment Zones	**Not Applicable.** The existing/proposed land use zones are not a business or industrial zone.

Section 9.1 Directions		Consistency
7.2	Reduction in Non-Hosted Short-Term Rental Accom. Period	**Not Applicable.** Only applies to Byron Shire Council currently.
7.3	Commercial and Retail Dev. along the Pacific Hwy, North Coast	**Not Applicable.**
Focus Area 8: Resources and Energy		
8.1	Mining, Petroleum Production and Extractive Industries	**Consistent.** The proposal does not carry out mining or production industries.
Focus Area 9: Primary Production		
9.1	Rural Zones	**Inconsistency justified.** This Proposal seeks variation to these directions as it rezones rural/environmental zoned land for residential purposes in accordance with the adopted recommendations of the OHLS and justified in more detail in abovementioned.
9.2	Rural Lands	
	a) be consistent with any applicable strategic plan, including regional and district plans endorsed by the Planning Secretary, and any applicable local strategic planning statement	**Consistent.** The adopted *Housing Strategy* recommends the site is rezoned for urban residential purposes and has sought to minimise or mitigate impacts on agricultural land. The consistency of the Proposal against the Regional Plan and Local Strategic Planning Statement is outlined prior.
	b) consider the significance of agriculture and primary production to the State and rural communities	Whilst it is clearly acknowledged in Council's strategies that agriculture is of major significance to the Central West regional economy – there must be a balancing of this with the need for housing to support local growth.
	c) identify and protect environmental values, including but not limited to, maintaining biodiversity, the protection of native vegetation, cultural heritage, and the importance of water resources	The site constraints are minimal and can either be avoided or impacts minimised or mitigated. The supporting Structure Plan demonstrates how future development could address these constraints.
	d) consider the natural and physical constraints of the land, including but not limited to, topography, size, location, water availability and ground and soil conditions	The Planning Proposal is supported by the Urban Design Study attached.

Section 9.1 Directions		Consistency
	e) promote opportunities for investment in productive, diversified, innovative and sustainable rural economic activities	The site has limited potential for future viable agricultural growth and investment, and this is best focussed on less fragmented/conflicted land. This is discussed in detail prior.
	f) support farmers in exercising their right to farm	The site has extensive buffers (roads/rail) to adjacent agricultural lands so the Right to Farm on adjacent lands should not be impeded.
	g) prioritise efforts and consider measures to minimise the fragmentation of rural land and reduce the risk of land use conflict, particularly between residential land uses and other rural land use	As the Candidate Area is already fragmented and isolated the highest and best use is for a logical urban extension, suitably buffered from surrounding agricultural lands. This will lessen the need for urban form to encroach on other, more viable, agricultural lands.
	h) consider State significant agricultural land identified in chapter 2 of the *State Environmental Planning Policy (Primary Production) 2021* for the purpose of ensuring the ongoing viability of this land	The site has previously been mapped as draft State Significant Agricultural Land (this has not yet been adopted) along the BSAL mapping boundaries. Protection of this narrow band along the western edge of Orange and may be lower priority than protection of BSAL land south of the railway line where there is less conflict with urban expansion.
	i) consider the social, economic and environmental interests of the community.	The OLHS and this Proposal has considered the social, economic and environmental interests of the community and this Proposal is a reasonable balancing of potential conflicts.
9.3	Oyster Aquaculture	**Not Applicable.**
9.4	Farmland of State and Regional Significance on the NSW Far North Coast	**Not Applicable.**

Section C – Environmental, Social and Economic Impact

8. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected because of the proposal?

Flora and fauna

The Preliminary Flora and Fauna Assessment has confirmed that there is a low likelihood of impact from the Proposal on critical or threatened species, populations or ecological communities or their habitats. The site is significantly disturbed pasture with limited native vegetation. The area of mapped terrestrial biodiversity is a non-native pine plantation and is being sought to be removed from the mapping as part of this proposal.

Vegetation on the site has been extensively modified through historic orcharding practices and agricultural processes including pasture improvement and livestock grazing. Grasslands are the predominate vegetation type across the site. Small pockets of native vegetation were present on site and represent an area of 0.82 hectares.

There are few habitat features remaining on the site. Habitat attributes for the Regent Honeyeater, Bush Stone-Curlew, Speckled Warbler, Brown Treecreeper, White fronted Chat, Little Eagle, Booroolong Frog, Scarlet Robin, Flame Robin, Superb Parrot, Australian Painted Snipe, Yellow Bellied Sheath-tail Bat and the Diamond Firetail are found within the subject site, however the relatively small amount of habitat and availability of alternatives within the locality suggest that there would be limited habitation on the subject site.

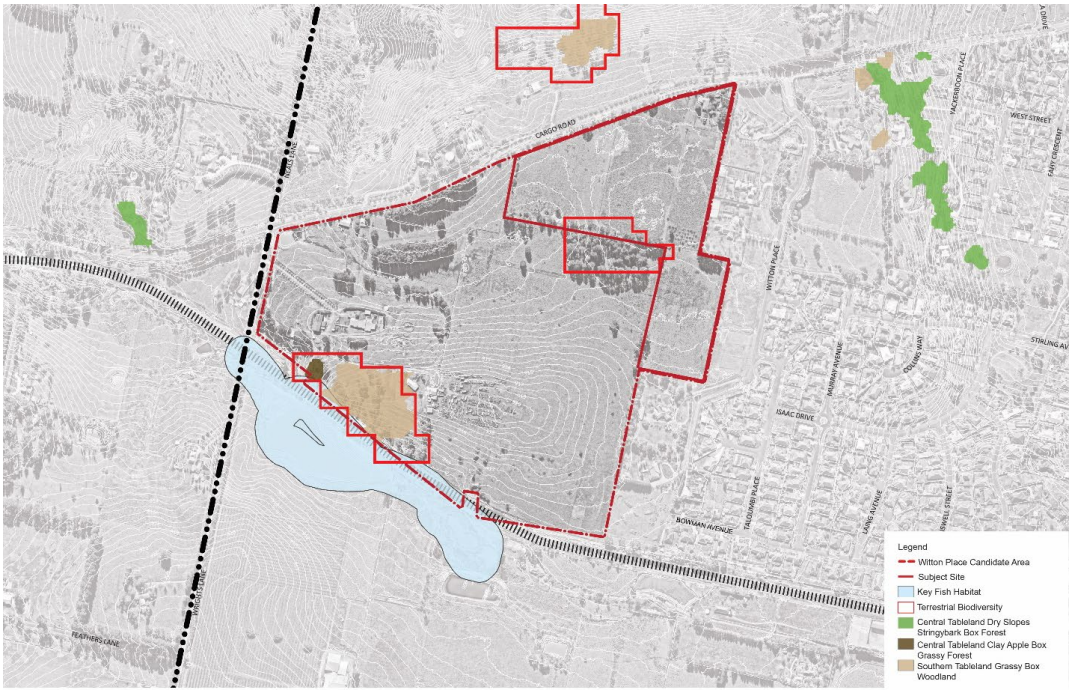


Figure 11 Biodiversity Analysis

Future development of the site will be subject to a Biodiversity Assessment Report or a Biodiversity Development Assessment Report dependent on the extent of clearing of the native vegetation found onsite.

Hydrology

The site contains a headwater flow path, known as a first order stream under the Strahler stream ordering system. This stream forms part of Molong Creek catchment, within the mid-Macquaire tributaries. There are no threatened fish species or populations, or endangered aquatic ecological communities identified to be potentially occurring within the site. The subject site is also located within Molong Drinking Water Catchment.

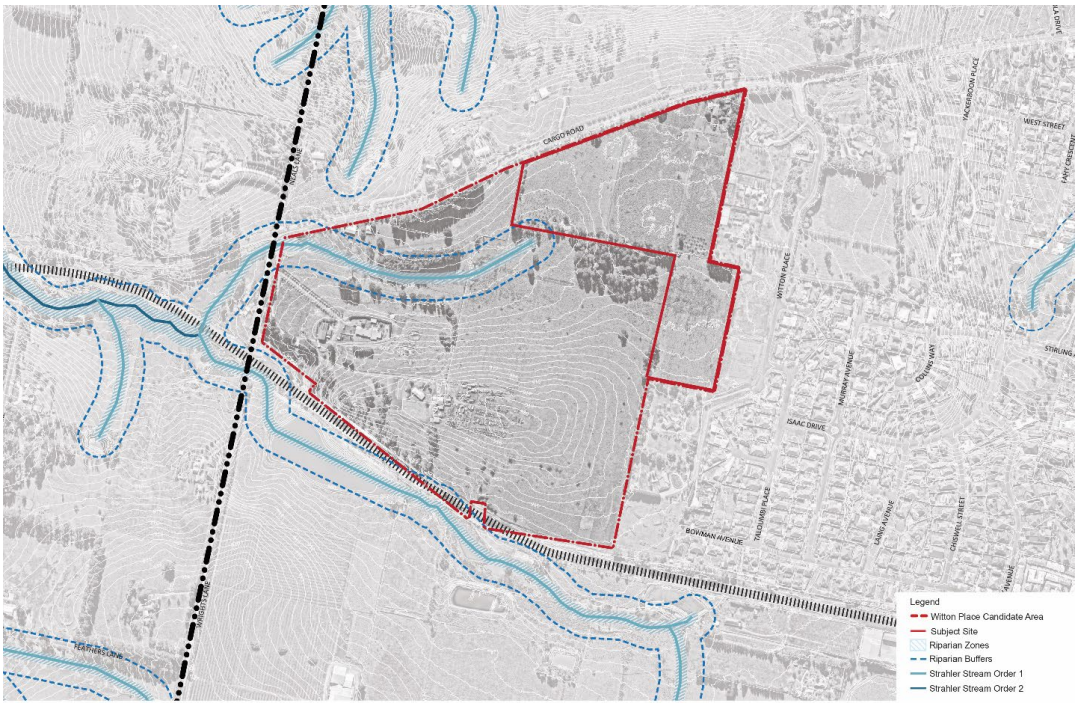


Figure 12 Hydrology Analysis

Groundwater

The subject site and Candidate Area is identified as groundwater vulnerable through the OLEP 2011 and has been identified at a minimum depth of 8 metres on the site, it is not expected that the proposal or subsequent developments will have significant impact on any groundwater ecologies.

9. Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?

Bush fire

The Proposal has been supported by the Strategic Bush Fire Study. Bush fire hazards were identified on the northern, western and southern sides of the development. Maintained residential land is present to the east of the site and are considered managed land and not a bush fire hazard. The largest APZ applicable to the site is 25m due to the Pine Plantation, however it is expected this will be removed as confirmed with Council, requiring an APZ of 11 metres for any future subdivision.

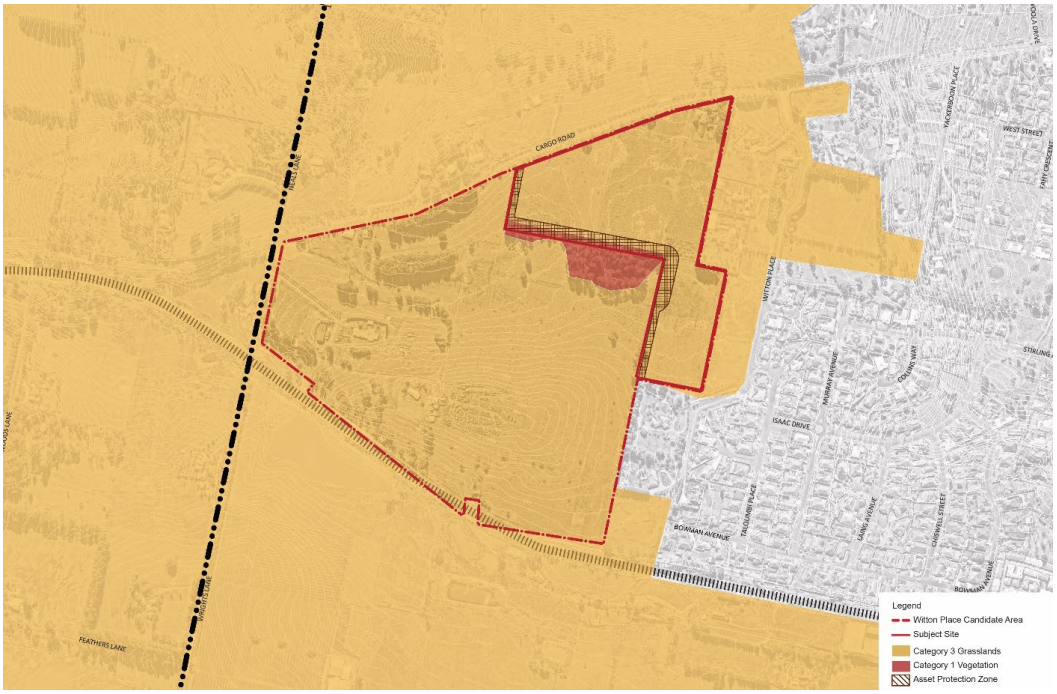


Figure 13 Bush Fire Analysis

The 277 Cargo Road site has one access onto Cargo Road until the Witton Place Candidate Area is developed. The furthest lot is approximately 500m from the road connection. The future subdivision design will include internal roads that moves people towards the key access/egress points and not through higher risk bush fire lands.

The development is less likely to support Special Fire Protection Purposes such as aged care or schools due to distance from services. There is a low probability these higher risk land-uses increasing demand for emergency services. This is consistent with the OHLS as the site is not identified to require any social infrastructure above and beyond the open space network proposed in the Structure Plan.

The broader Candidate Area benefits from being buffered by Cargo Road to the north, the Broken Hill Railway Line to the south, Neals Lane to the west, and urban development to the east that is likely to reduce bush fire risk. The risk to the site largely remains within the Candidate Area if a fire were to occur. Given the broader context, Bush Fire is not expected to be a major constraint to urban residential development of the Site with appropriate buffers around the future subdivision provided by roads and asset protection zones where required.

Future applications will be assessed against Planning for Bush Fire Protection 2019 (NSW Rural Fire Service) to ensure that acceptable solutions or suitable performance solutions are proposed, and the application is compliant.

Stormwater and water quality management

The subject site is located within Molong Drinking Water Catchment. The Cabonne Settlement Strategy (2021) notes that development within the Catchment should be minimised unless high levels of water management demonstrate that impacts can be avoided or mitigated.

The Structure Plan and supporting Water and Sewer Strategy identifies the water management approach onsite. On-Site Detention (OSD) at the western-most / lowest point of the Candidate Area (near Neals Lane) is a logical location to capture stormwater from the entire area. However, until this is developed temporary sub-basins and water treatment areas are to be located on the western edge (low-point) of the site, being 277 Cargo Road.

This Strategy limits post-development flows to pre-development flows and will ensure neutral/beneficial water quality. This would primarily be achieved by the proposed OSD system. Heath Consulting have modelled an appropriately sized OSD to meet the requirements of urban development of the Site in the depression towards the western corner. This could be removed once the land develops to the west and there was a Candidate Area OSD to enable extension of the new internal road network, and the open space network would primarily facilitate the development of the additional basins required.

As the site is not in the Ploughman Creek stormwater harvesting area it is not required to have dual-pipe non-potable water supply from this system. Therefore, there is potential to require rain-water tanks for each individual dwellings consistent with BASIX requirements to provide some additional detention from roof areas.

Council is also mindful of water 'balance' and not placing additional demand on existing water catchment and treatment systems for the city. The Housing Strategy identifies that the Candidate Area could look at relocating stormwater back to the Ploughmans Creek catchment for stormwater harvesting as one means to balance water consumption on the Site. However, this would need to be balanced with any loss of environmental flows into Molong Creek and its water supply system.

Heath Consulting have modelled the combination of stormwater management systems including a central on-site detention pond, SPEL Ecoceptor gross pollutant trap, and rainwater tanks and demonstrated this will significantly reduce suspended solids, phosphorus, nitrogen and gross pollutants below Council's standard requirements. This will continue to be investigated in more detail at the Development Application stage.

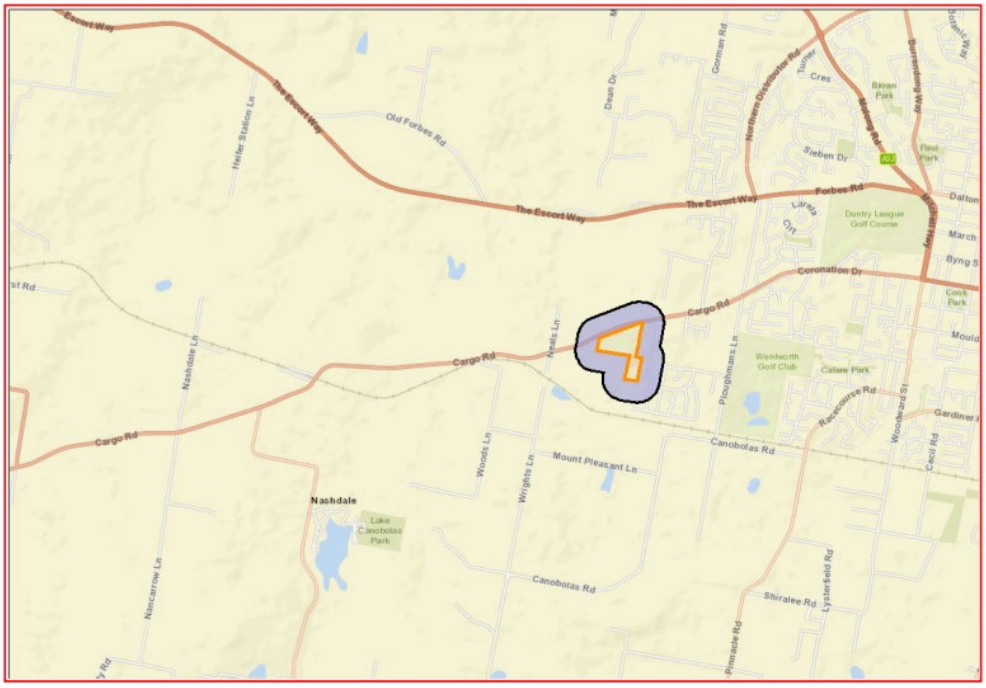
Aboriginal cultural heritage

The Orange Aboriginal Heritage Report (OAHR) has been reviewed as part of the assessment to assess risk of impact. The site is not located on a major watercourse or on land with significant topography or natural features that would increase the chance it was a significant cultural or archaeological site and is not an identified 'Site of Significance' in the OAHR.

The site has been used for orcharding (intensive horticulture) and extensive agriculture for a significant period which is likely to have significantly disturbed/modified the upper soil layers and reduced the potential for intact archaeology or cultural sites. A Basic AHIMS search on 17/10/2022 for the Site with a 200m buffer and no Aboriginal sites or places are recorded or have been declared in the search area. Therefore, the risk of impact to Aboriginal archaeology is relatively low.

It is noted that the site does contain views to Gaanha bula (Mount Canobolas) a known area of significance to the local first nations people. The Development Control Plan will ensure significant view corridors are protected from the public domain

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

Figure 14 AHIMS Results

Non-Indigenous heritage

The site is not a listed heritage item or in a heritage conservation area. The nearest item is to the south of the railway line – *Item No.19 'Glengarra' homestead* more than 800m from the Site. It is unlikely the subdivision would have a significant impact on surrounding heritage item(s) due to the separation distances and buffers of Cargo Road and the railway line and the topography limiting sightlines.

Traffic and transport

The Proposal is supported by the Transport Assessment and Addendum. Consultation has been undertaken with Council and Transport for NSW (TfNSW) to ensure the following has been adequately addressed:

- Land use strategies and direction for the Site
- Nearby road and intersection analysis
- Current traffic counts (traffic surveys) and traffic growth projections (SIDRA assessment for intersections)
- Traffic generation/volumes and proposed local roads
- Key intersection analysis, delays and level of service and nearby crash data
- Active transport and public transport facilities near the Site and future potential link
- Review of the Proposal and its impacts
- Additional review of different traffic percentages on different routes.

During the Scoping Proposal stage, consultation with TfNSW was undertaken December 2022. This feedback noted that Cargo Road (MR237) is a classified Regional Road (Council is the roads authority). Due to concerns of sight-line distances on Cargo Road, TfNSW suggested preference should be given for all road access, including the existing dwelling to be retained, to be provided via the local public road network to the east (Witton Place and Bowman Ave).

Subsequently, there has been extensive consultation and provision of updated Transport Assessment(s) to Council and TfNSW to support the proposed connection to Cargo Road.

This Proposal seeks to have its primary road access to Cargo Road but supplement this with (future) secondary access via Bowman Avenue (and possibly Witton Place) for the following key reasons:

- Council's Housing Strategy has accepted that access to Cargo Road may be supported subject to the outcomes of the Transport Assessment. Council have flagged that traffic generation to other local streets may be an issue and need to be addressed.
- Councillors have specifically rejected the opportunity for the Candidate Area to provide vehicle connection (in the future) to Neals Lane.

- The local road network via Bowman Avenue does not provide reasonably direct paths of travel between the site and key attractions in Orange so, as stated in the Transport Assessment, it is less likely to be used as a primary access route. There are numerous intersections and turns required to connect to Ploughmans Lane. The traffic from the Candidate Area would impact on a significant number of properties along this route and is unlikely to be supported by those residents. However, it is suitable as a secondary access and particularly for pedestrian and bicycle access.
- Witton Place connects to Cargo Road east of the site. The Transport Assessment outlines that the Cargo Road connection is sufficient for the yield proposed under this Planning Proposal. However, this Proposal could provide an additional connection as shown on the plans near the intersection with Taloumbi Place subject to those landowners providing that access.
- The Transport Assessment concluded that most traffic is likely to utilise a direct connection to Cargo Road in accordance with different distribution profiles set out in the report (in preference to other local road connections as these are the most direct paths - *Section 5.5 Trip Distribution*). Few if any trips would be generated to the east through Bowman Avenue.
- The Transport Assessment states that the site can have primary access directly to Cargo Road and does not rely on other road connection (Witton Place/Bowman Avenue) for operation. The location chosen has a suitable width to allow for road widening, a reduced number of street trees that would be impacted by the road upgrades/access, and good sightlines that comply with standards based on the current speed limit.
- The Assessment notes that the warrants for the design of new Cargo Road intersection would likely require a Basic Right Turn (BAR) and Basic Left Turn (BAL) to the site from Cargo Road and a BAL turn from the new internal road to Cargo Road. These are similar intersection treatments to Yackerboon Place, Ploughmans Lane, and Kooranga Avenue.
- The Cargo Road Intersection location provides suitable site distances in both an east and west direction that can meet or exceed an SISD requirement of 151m in both directions (70km/hr) – noting it is currently 60km/hr and may reduce to 50km/hr in the future.
- The Structure Plan demonstrates the Candidate Area can support a clear internal road network for ease-of-navigation and wayfinding.
- Roads setback from Cargo Road and the railway line provide internal access to lots along these frontages. These extend to east-west connections into the existing urban area. Most new roads align just off north-south to run across contours and promote east-west lots with good passive solar access.

The following hierarchy in road reserve width and design is adopted as a concept:

- 25m – Northern Entry Street from Cargo Road into centre of Site along primary open space – two-way traffic, parking both sides with wide verges, shared path, boulevard/median entry planting;
- 20m – Local Street Network – two-way traffic, parking both sides with wide verges;

- 18m – Interface Streets - two-way traffic, parking one side with normal verges and on-road cycleways.

The site would provide the primary access point to Cargo Road with higher-level connector roads behind the Cargo Road frontage and a key north-south road. The roads provide frontages to part of the proposed park area for access and casual surveillance, minimising the number of rear fences of dwellings facing the park.

The Transport Assessment assessed the vehicle volumes on the internal road network against Council's Subdivision Code to determine different road classes and road profiles and these can be accommodated within the site and Candidate Area with detail at the Development Application stage.

The Transport Assessment demonstrates that there is an existing public bus route along Witton Place and a new/amended route could be provided through the Site running along the urban collector roads / perimeter road/ or north-south roads (TBC) and would provide access to bus stops within 400m of most dwellings. These would connect to Orange's CBD and key transport services.

The Proposal provides for good pedestrian/cycle connectivity through the site in accordance with the Subdivision Code. A primary shared path can be facilitated running east-west withing the open space corridor through the site and beyond, this is proposed to connect on-road back to Cargo Road and through Bowman Avenue (in the future) – connecting to shared paths along the Ploughmans Valley Wetlands where Council's Active Travel Plan identifies key bicycle routes.

Noise

Cargo Road is located to the north of the site and is a classified road. Traffic volumes on this road are higher than other local roads around the Site so there is a need to consider and address traffic noise on dwellings fronting this road.

The primary vehicle noise and vibration that could affect the site is development along the Cargo Road frontage. Cargo Road is an important connector to the west and south via Canowindra but The Escort Way is generally a higher order road for heavy freight vehicles due to the topography, slower maximum speeds, and poorer road conditions along Cargo Road.

The Preliminary Traffic Noise Assessment has been prepared to support this Proposal that addresses the Development Near Rail Corridors and Busy Roads – Interim Guideline (Interim Guideline) (2008). This has assessed noise from projected traffic volumes on Cargo Road to determine the category of acoustic treatment required under the Interim Guideline for residential dwellings.

By proposing lot sizes of 1,500m^2 or greater along the Cargo Road frontage it allows for minimum 15m setbacks of dwelling envelopes from Cargo Road boundary (with additional setback to the road edge) to minimise impacts from road traffic on residential amenity.

The Noise Assessment has determined that with a setback of 28m to 78m from the road/kerb edge of Cargo Road all dwellings would only require Category 1 Acoustic Treatment under the Interim Guideline. Therefore, as shown on the Structure Plan, only the proposed lots fronting Cargo Road would require acoustic treatment.

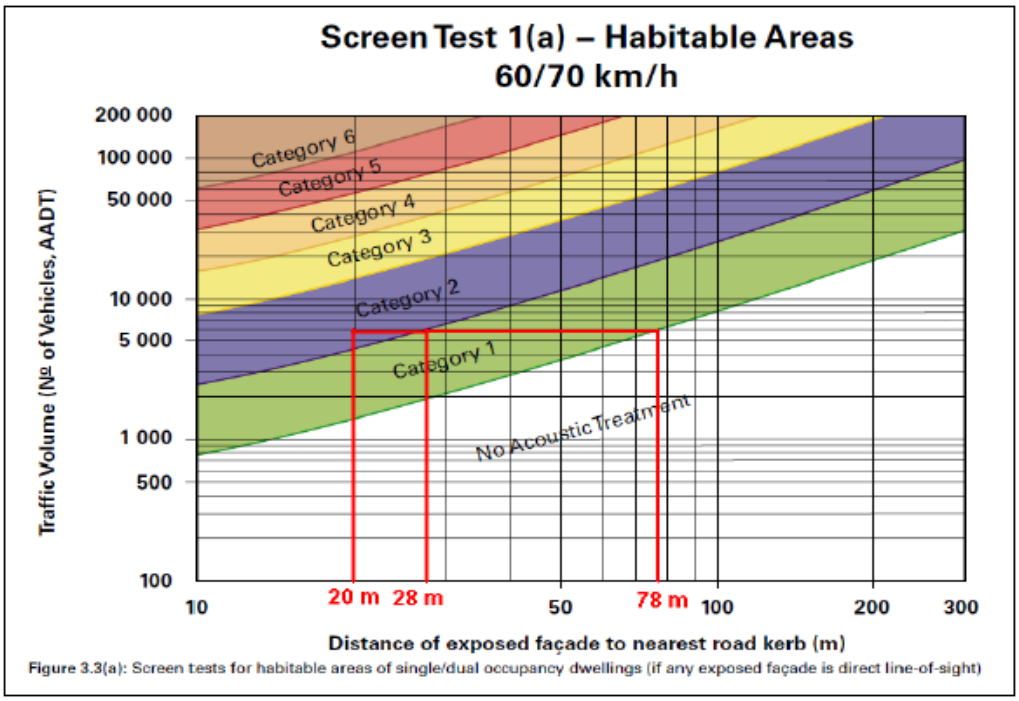


Figure 15 Acoustic treatment analysis

The Category 1 Acoustic treatments are set out in Section 4 of the Noise Assessment and can be achieved with some minor construction standards for residential development. Therefore, the site can achieve the required residential amenity without significant impact from Cargo Road traffic noise and without visually intrusive mounding or acoustic fencing.

Contamination

The site is not identified on the NSW EPA Contaminated Land Record of Notice as being contaminated. The site was used for horticultural plantings/orchards from approximately the 1960s onwards. This site does not include the car/vehicle yard in the western part of the Candidate Area thus the risk of contamination from that source to development of the Site is low but this may need to be reviewed for the broader Candidate Area.



Figure 16 Historic aerial photo of Site from 2/01/1964 (NSW Portal).

As a result of historic intensive agricultural uses on the Site and some farm buildings, a Preliminary Contamination Investigation has been prepared.

The report recommends that areas of environmental concern are required to be remediated to enable the residential land-use and prevent any environmental impacts. Remediation of the site will need to be supported by a Remediation Action Plan (RAP) at the Development Application stage. A validation assessment is to be undertaken to confirm that no residual contamination is detected after

the completion of the works. The areas of concern are in relatively small locations at low depth and are expected to be excavated and removed from the site.

Agricultural land

The site contains alluvial soils located within the mapped Biophysical Strategic Agricultural Land (BSAL) that runs from the railway line up the western edge of the urban area of Orange. An analysis of historic aerial photos from the 1960's indicates this aligns with a belt of orcharding/intensive horticulture that historically occurred in these areas.



Figure 17 Geology and BSAL Analysis

Urban development north of The Escort Way already encroaches this area.

DPI notes there are inconsistencies or competing requirements between and within Council's adopted land use strategies that seek to protect agricultural land but also identify the Candidate Area for Orange's growth in the short-term. DPI's primary concern appears to be that consumption of higher quality agricultural land should only be supported where there is a clear strategic direction that it has a higher and better use for urban growth. This has largely been addressed through prior sections of the Planning Proposal.

Mineral resources

The site does not appear to be directly affected by any existing known extractive industries or exploration licences as the exploration licences are mostly to the west of the Orange LGA boundary.

The risk of new extractive industries commencing close to the existing urban areas of Orange is low. The Subregional Rural and Industrial Land Use Strategy (p.47) states that mining is less likely to occur in BSAL areas and around Mount Canobolas. Development of a site immediately adjacent to this urban area is likely to have the lowest impact on future mineral resource potential compared to developments further from Orange's urban area.

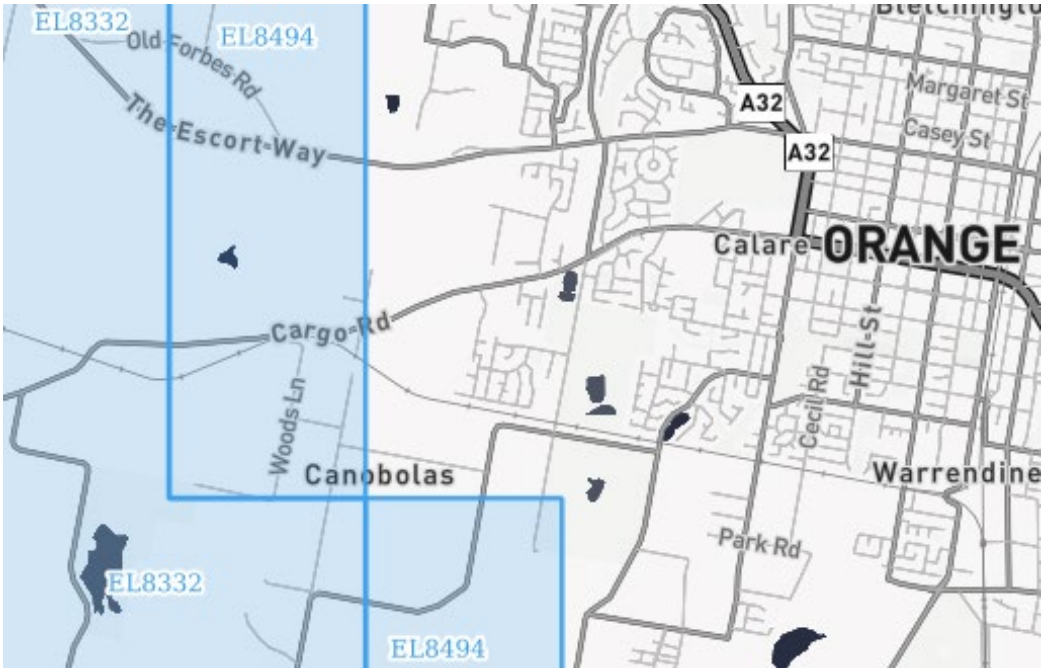


Figure 18 Common Ground Results

Scenic quality and visual impact

Prominent ridgelines run along Witton Place the slope falls away to West within the site. There is another ridge line that runs along the bottom third of the site. There are three high points within the site one of which is visible from Cargo Road, Witton Place and Bowman Avenue.

The site is located on the western entry into the City, which is currently characterised by planted rows of fruit, cedar and oak trees, which provide a buffer from viewing into and across the site. The broader area and the site are nominated as a Scenic Protection Zone under Council's Development Control Plan due to the height of the site. Larger lots present along the ridgeline of Witton Place creating a visual buffer to any development that occurs to the west. Key views into the site are located at Neals Lane and from Witton Place and Bowan Avenue. Significant views to Gaanha Bula (Mount Canobolas) are located within the site.

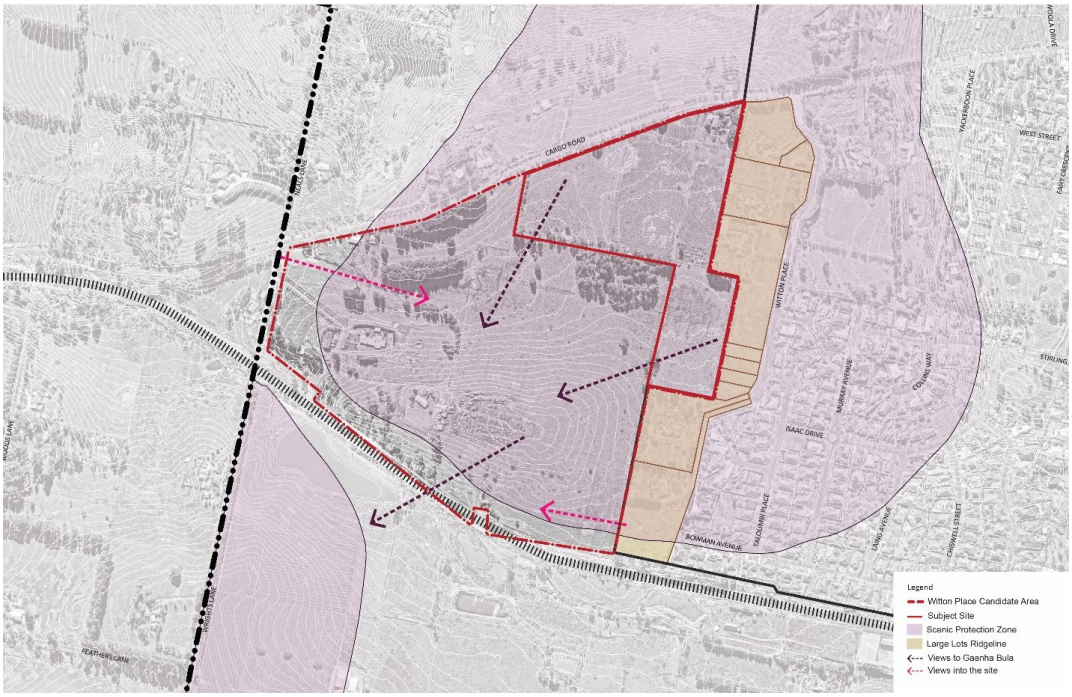


Figure 19 Scenic and Visual Analysis

10. Has the planning proposal adequately addressed any social and economic effects?

Housing need

The NSW Government population projections suggest that the Orange LGA will experience steady population growth over the coming decades. Between 2021 and 2024, the population of the LGA is likely to increase by approximately 8,180 residents. The Orange LGA will represent about 50% of the broader Central West Region population in the coming years.

In 2021, 18,670 dwellings were recorded in Orange. Based on the projected population growth, it is estimated that 21,900 dwellings may be required in the LGA to accommodate the population in 2031. This implies that an additional 3,230 dwellings will be required over the 10 years between 2021 and 2031, or an additional 320 dwellings per annum. The Proposal will assist in delivering approximately 100 dwellings.

The OLHS indicates a mismatch between current housing supply in Orange and the need. Almost 85% of housing in Orange in 2021 was large, detached housing, while 52% of households were smaller, with 27% of households being lone person households and 25% being couple only households. Given the lack of housing options, over 80% of households live in separate housing, regardless of household size.

Smaller households are expected to grow in proportional share in the coming years to reach 56% in 2031. This includes a projected 27% of lone person households and 30% of couple only households in 2031. The proportion of older residents (aged >60 years) is expected to grow from 23% in 2021 to 26% in 2031, while growth is also expected in the proportion of middle-aged residents (40-49 years) and pre-retirees (50-59 years).

The Planning Proposal has been amended in response to the above, to include the R1 General Residential zone and removed the minimum lots size for this zone. This was in response to the development of a site-specific Structure Plan identifying the capability of the site to cater for an increased yield and provide flexibility for a greater mix of lot sizes and housing types within the site. The R1 zone allows for greater flexibility in dwelling typologies that are permissible within the site, and the removal of the Minimum Lots Size from the corresponding zone, provides flexibility as the subdivision occurs to provide varying lot sizes to cater to the market needs. This aligns with the projected population growth and demographic analysis within the OLHS.

Social infrastructure

An analysis of social infrastructure close to the site, based on the assumed delivery of 100 dwellings and a total forecast population of approximately 250 people. A range of social infrastructure facilities is available within 1 km, 2 km and 5 km of the site. Application of social infrastructure benchmarks demonstrates that the relatively small estimated future population does not generate enough demand for new facilities within the site.



Figure 20 Social Infrastructure Analysis

Economic impact

Given the sites projected population and the potential yield the economic impact of the site is considered relatively minimal compared to other Planning Proposals within the Orange LGA. The conversion of the land which is currently being utilised for lifestyle agricultural blocks, with no primary production value to residentially zoned land being R1 General Residential and R2 Low Density Residential will allow for increased housing capacity within the City allowing people to move within the LGA and from other areas, creating increased capacity for people to live and work within the Orange Local Government Area.

Section D – Infrastructure (Local, State and Commonwealth)

11. Is there adequate public infrastructure for the planning proposal?

Water and sewer

The site is capable of connection to the reticulated potable water network. Council has provided an Addendum in consultation with the proponent's consultant indicating that there is sufficient capacity in the existing water supply system for the indicative yield for the site (approximately 100 Equivalent Tenements/Dwellings).

The Candidate area is outside of Council's current dual water service reticulation area and outside the Ploughmans Creek catchment so Council will not require installation of non-potable piping for irrigation and other non-potable uses. This may enable the introduction of water tanks for dwellings to provide some retention capacity and reduce stormwater peak flows.

The site is capable of connection to the reticulated sewer network. However, the site will require a new sewer pump station to service the site (location to be agreed) as a new sewer connection from Lake Canobolas will no longer pass by the Site. Council has provided an Addendum in consultation with the proponent's consultant indicating that there is sufficient capacity in the existing water supply system for the indicative yield for the site (approximately 100 Equivalent Tenements/Dwellings).

Most importantly, a temporary sewer pump station on the site is agreed as the easiest way forward until the land is available for development of a more permanent pump station closer to Neals Lane when the larger Candidate Area is developed.

Council is currently preparing an updated Servicing Strategy (Water and Sewer) that will guide development on this and other candidate growth areas, but this may not be available until the Subdivision Application is prepared.

Electricity

There are existing overhead electricity lines along Cargo Road to/near the Site. Further investigation will occur to determine network capacity and upgrade requirements at the DA Stage with preliminary consultation during the exhibition of the Planning Proposal.

Section E – State and Commonwealth Interests

12. What are the views of state and federal public authorities and government agencies consulted in order to inform the Gateway determination?

The list of authorities that have been contacted/engaged as part of the preliminary stages of this Project (and Scoping Planning Proposal) are listed in Section 3.5 - Part 5 Community Consultation. There will be further consultation in accordance with the Gateway Conditions during the public exhibition of the Planning Proposal. This is a local development that has limited state-significant issues and no known federal issues other than biodiversity conservation.

3.4 Part 4 - Maps

For the purposes of public exhibition, the following maps have been provided. Maps will be prepared consistent with the Standard Technical Requirements for Spatial Datasets and Maps following public exhibition.

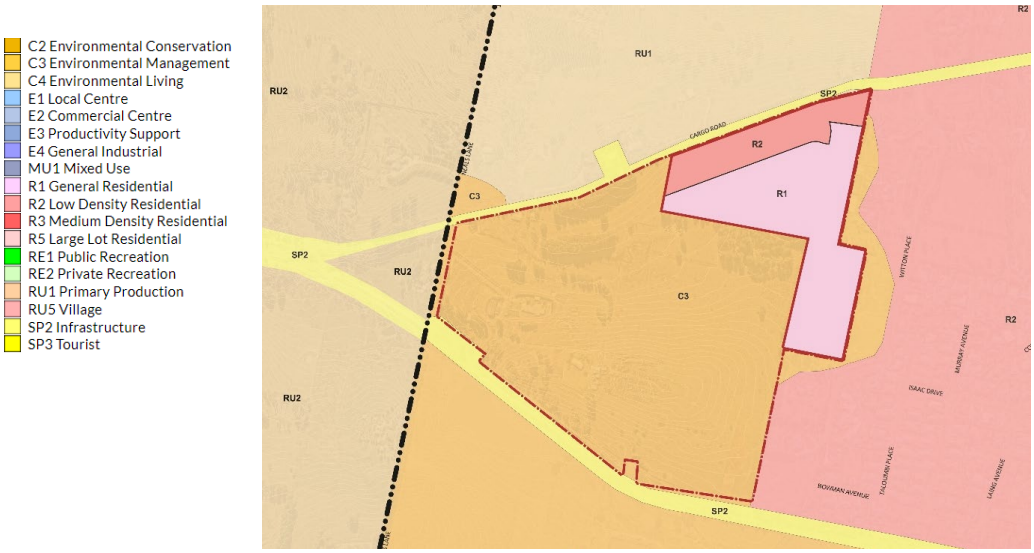


Figure 21 Land Use Zone

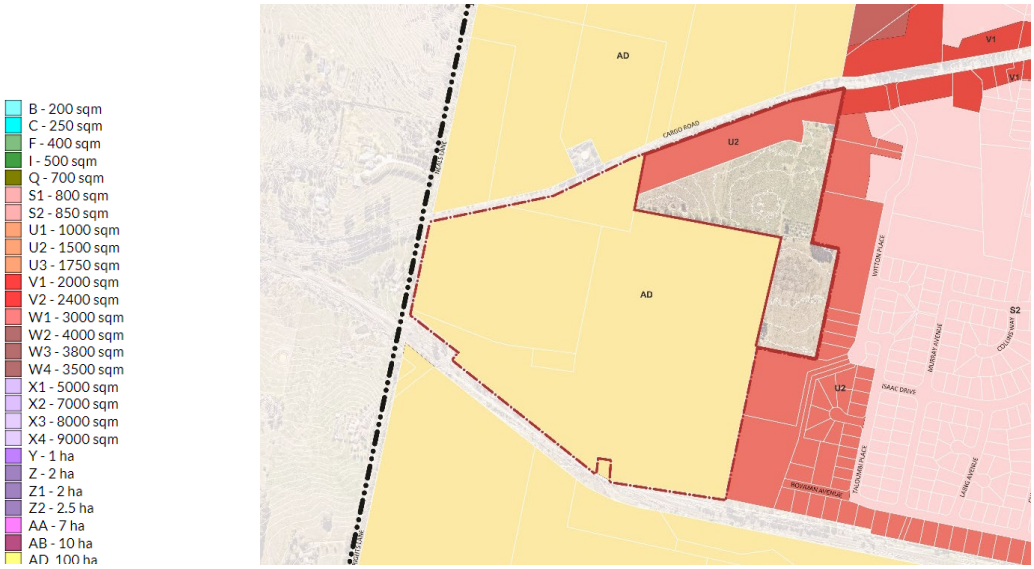


Figure 22 Minimum Lot Size

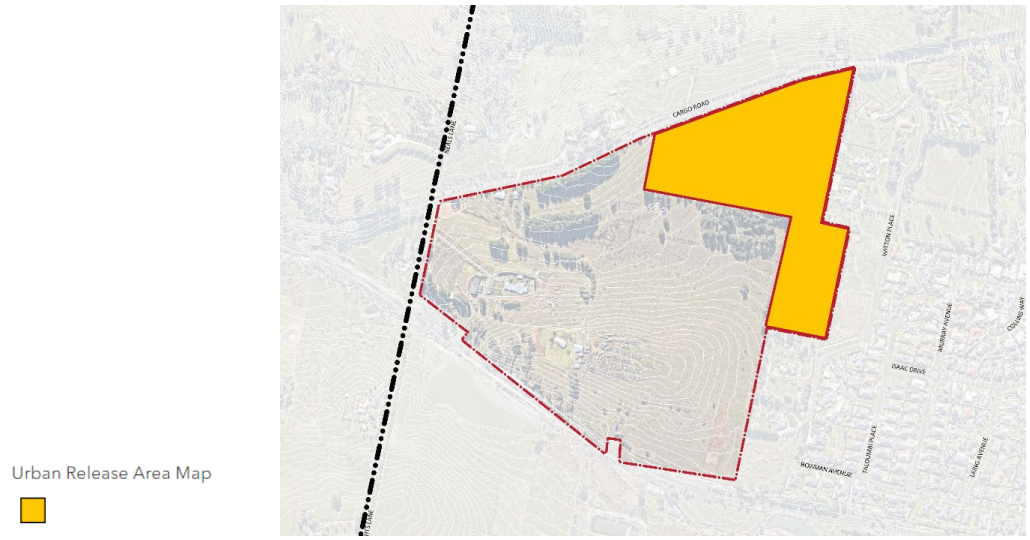


Figure 23 Urban Release Area



Figure 24 Environmentally Sensitive Land

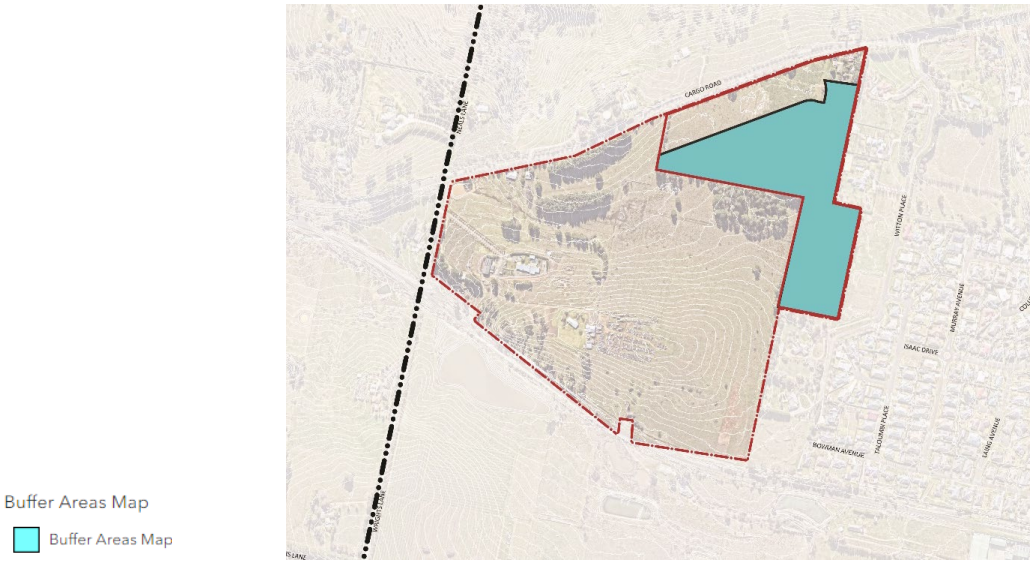


Figure 25 Buffer Area

3.5 Part 5 – Community Consultation

Completed as part of Scoping Proposal

The Proponent provided a draft Proposal prior to a meeting with Orange City Council staff on 16 September 2022 to discuss some preliminary issues and way forward and received correspondence from Council water and sewer manager.

Subsequently, a Scoping Planning Proposal was formally issued to Council by email dated 17 October 2022. Council then forwarded the Scoping Proposal to several agencies which included:

- DPHI Planning and Assessment (Local and Regional Planning) - DPHI
- Transport for NSW (Regions) - TfNSW
- NSW Department of Primary Industries (Agriculture) – DPI Agriculture
- NSW Environment, Energy and Science (Biodiversity) – EES Biodiversity

Subsequently, Council provided agency feedback by email dated 2 December 2022 from only two (2) agencies, summarised as follows:

- **Transport for New South Wales (TfNSW)** - Email from Masa Kimura, Development Services Case Officer – which notes Cargo Road (MR237) is a classified Regional Road with Council as the road authority. The preference was for all road access being provided by local public roads (Witton Pl and Bowman Ave), though subsequently it requested a Traffic Impact Assessment (requirements were listed) that addressed access to Cargo Road including sight-distances; turn treatment warrants, swept path analysis, and any changes in speed zones.
- **Department of Primary Industries and Regional Development** – Letter dated 15 November 2022 signed by Tamara Prentice (Manager, Agricultural Land Use Planning) – This notes the site is mapped as Biophysical Strategic Agricultural Land (BSAL) and draft State Significant Agricultural Land (SSAL). DPI Agriculture seeks to protect productive agricultural land but also recognises that on occasion this land may meet a higher and better use where it is strategically planned for this purpose.

In 2023, the Applicant had extensive meetings and correspondence with TfNSW and Council on the traffic implications of the Proposal including the preparation of an amended/updated Traffic Assessment.

The Planning Proposal will be publicly exhibited in accordance with the Gateway Determination requirements and Guidelines. As a 'Standard Planning Proposal' the public exhibition period is likely to be a minimum of 20 working days (excluding public holidays) consistent with Council's Community Participation Plan. The Planning Proposal will be exhibited via the NSW Planning Portal.

It is recognised that some site issues may require additional consultation with other agencies during the public exhibition of the Proposal after Gateway Determination including, but not limited to (in accordance with Guideline Attachment B):

- Transport for NSW (Regions - TfNSW/RMS) for access to Cargo Road;

- Cabonne Council to discuss the potential impacts on Molong Creek catchment;
- NSW Department of Climate Change, Energy, the Environment, and Water (Biodiversity, Conservation and Science) for removal of biodiversity overlay over part of Site (pine trees);
- NSW Department of Primary Industries (Agriculture) for impacts to agriculture and BSAL/SAL mapping.

3.6 Part 6 – Project Timeline

Table 6 Project Timeline

Stage	Estimated Timeframe and/or Date
Consideration by Council	2023 (complete) October 2024 Mtg (Gateway Alteration)
Council Decision	September 2023 Council Meeting November 2024 Meeting (Gateway Alteration)
Post-Approval Changes	None likely to be required
Provided to NSW Government	May-June 2024 (Original Gateway) By end November (Gateway Alteration)
Stage 3 - Gateway Determination	1 August 2024 (Original Gateway) By early December 2024 (Gateway Alteration)
Pre-Exhibition	Early December 2024
Stage 4 - Commencement and Completion of Public Exhibition Period	Mid-December 2024 to Mid-January 2025
Consideration of Submissions	Late January 2025
Stage 6 - Post-Exhibition Review and Additional Studies	Late January 2025
Council meeting to approve the LEP Amendment	February / March 2025
Submission to the Department for Finalisation (or Parliamentary Counsel if Council is the LPMA)	March 2025
Gazettal of LEP Amendment / Commencement	April 2025

ORANGE CITY COUNCIL

Witton Place Candidate Area

Urban Design Study & Preliminary Concept Plan

Technical Report SP 24-001

Prepared by Orange City Council

November 2024

ORANGE CITY COUNCIL

Disclaimer

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Document details

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CM Reference	F4125-14

Document history

Version	Status	Date of Issue
1	FINAL	7 November 2024

Acknowledgement of Country

This Urban Design Study was prepared on Wiradjuri Country.

Orange City Council acknowledges the Wiradjuri people as the Traditional Custodians of the land, waterways and skies to which this document applies. We acknowledge their living culture and relationship with Country, which have endured through deep time and which continue to inspire, teach and inform how to best understand the land and its people. We pay respect to their Elders past, present and emerging.

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1 Introduction

1.1 Background

This urban design study has been prepared by Orange City Council's urban planning team. The study is intended to guide long term land use planning and place design for the Witton Place Candidate Area.

The Witton Place Candidate Area is one of eight greenfield precincts (or "candidate areas") nominated by the Orange Local Housing Strategy as having the potential to meet the City of Orange's long term housing needs through future rezoning and development (Figure 1.1). The candidate area is located immediately west of Ploughmans Valley ("Area 4"), which has been subject to staged development as a low density residential precinct since its initial master planning in the late 1990s. The candidate area extends between the established Ploughmans Valley urban area and the City's local government area boundary to the west. As such, it forms a key visual gateway to Orange along the City's Cargo Road entrance.

The Witton Place Candidate Area comprises several landholdings with a combined area of 43.22 hectares. Stage 1 of the candidate area, comprising Lot A Lot A DP408148 (also known as No. 277 Cargo Road), has an area of 10.99 hectares and is currently subject to a planning proposal to rezone the land (PP-2023-934). Subject to future rezoning and site suitability assessment, it is anticipated that the Witton Place Candidate Area has the potential to yield around 300 dwellings.

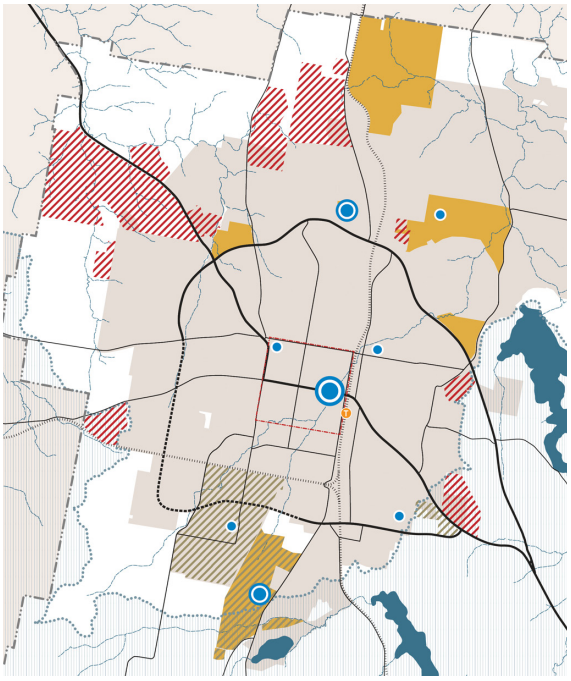


Figure 1.1 Candidate areas and urban growth precincts within the City of Orange

1.2 Purpose and scope

This study describes the outcomes of Council's urban design assessment of the Witton Place Candidate Area in general and the Stage 1 site in particular. It describes the urban design strategies and preliminary concept plan that are recommended to guide the candidate area's development as an holistic, sustainable and desirable residential precinct. In particular, the urban design study aims to—

(a) inform the preparation of current and future planning proposals for land within the candidate area,

(b) ensure sustainable neighbourhood design and place making in line with "green community" design principles,

(c) ensure housing provision is consistent with the City's overall social needs and Council's housing priorities (as articulated in the Orange Local Housing Strategy), and

(d) guide the preparation of place-based development controls (including both LEP and DCP controls).

While the urban design assessment has been informed by detailed technical studies prepared in relation to the Stage 1 site, analysis of the remaining land within the candidate area has been undertaken only at a desktop level. It is anticipated that this land will be subject to more detailed assessment as part of a future planning proposal (or proposals) prepared in relation to the land. Key technical studies that have informed the urban design study are listed in the References section of this document.

1.3 Document structure

The following sections of the urban design study comprise—

Section 2—Housing Growth Context	Describes the regional and local drivers of housing growth within the Witton Place Candidate Area.
Section 3—Site Analysis	Describes the key environmental, social and cultural features of the candidate area.
Section 4—Opportunities and Constraints	Describes the opportunities and constraints for sustainable place design and development.
Section 5—Urban Design Concept	Describes the urban design principles and preliminary concept plan that will inform future planning for the candidate area.
References	Lists the key information sources referred to by the study.

2 Housing Growth Context

2.1 Regional context

The City of Orange is located in the elevated, cool climate of the upper NSW Central Tablelands, a 200-kilometre (or 3-hour) drive west of Penrith. Along with Bathurst and Dubbo, Orange is one of three "regional cities" that anchor the centres hierarchy of the Central West and Orana region. Within this hierarchy, Orange and Bathurst are separated by only a 55-kilometre (or 45-minute) drive. The cities jointly act as the principal urban centres anchoring the "Central West Growth Corridor", which extends along the Mitchell Highway between Orange and Lithgow (see Figures 2.1, 2.2 and 2.3).

Orange occupies an influential location within the Central West and Orana's regional economic geography, enjoying strong connectivity to State and regional transport infrastructure, logistics networks, markets (eg, agriculture, mining, health care, education and tourism) and production flows (Figure 2.1). Within this network, the city is strategically located along key national, State and regional road and rail routes including the Mitchell Highway (A32), Broken Hill Railway Line (Adelaide) and Main West Railway Line (Sydney-Dubbo). In terms of travel distance, Orange enjoys a favourable location relative to other regional destinations and precincts, including Dubbo (150 kilometres, 1 hour and 45 minutes), the Parkes Special Activation Precinct (100 kilometres, 1 hour and 15 minutes) and the emerging Western Sydney Aerotropolis (215 kilometres, 3 hours).

Planning for the wider Central West and Orana region is undertaken in accordance with the Central West and Orana Regional Plan 2041 ("CW&ORP 2041"). Among other things, the CW&ORP 2041 explicitly recognises the strategic importance of applying urban design processes to place planning at the local scale. Strategy 9.3 of the plan requires local councils to "apply the seven urban design strategies for regional NSW" (as defined by Urban Design for Regional NSW) when planning for new urban precincts. These strategies have informed the place design principles and concept plan described in this Urban Design Study.



Figure 2.1 Regional transport context (Source: *Central West & Orana Regional Plan 2041*)

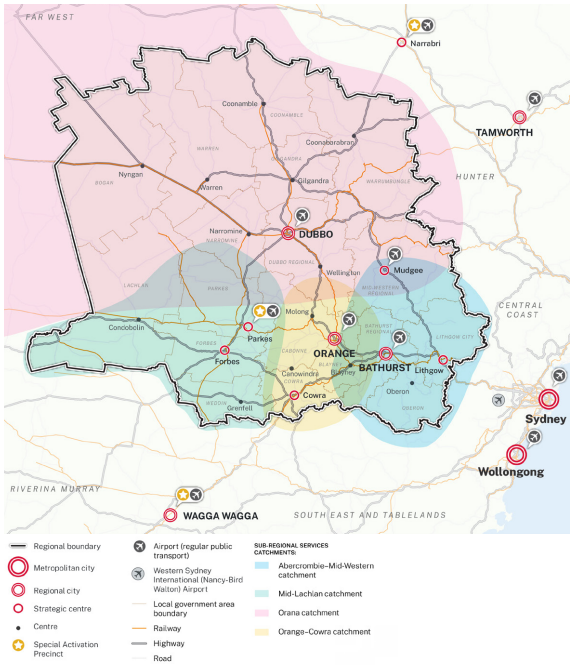


Figure 2.2 Regional centres and service catchments (Source: *Central West & Orana Regional Plan 2041*)

Figure 2.3 Central West and Orana regional vision (Source: *Central West and Orana Regional Plan 2041*)

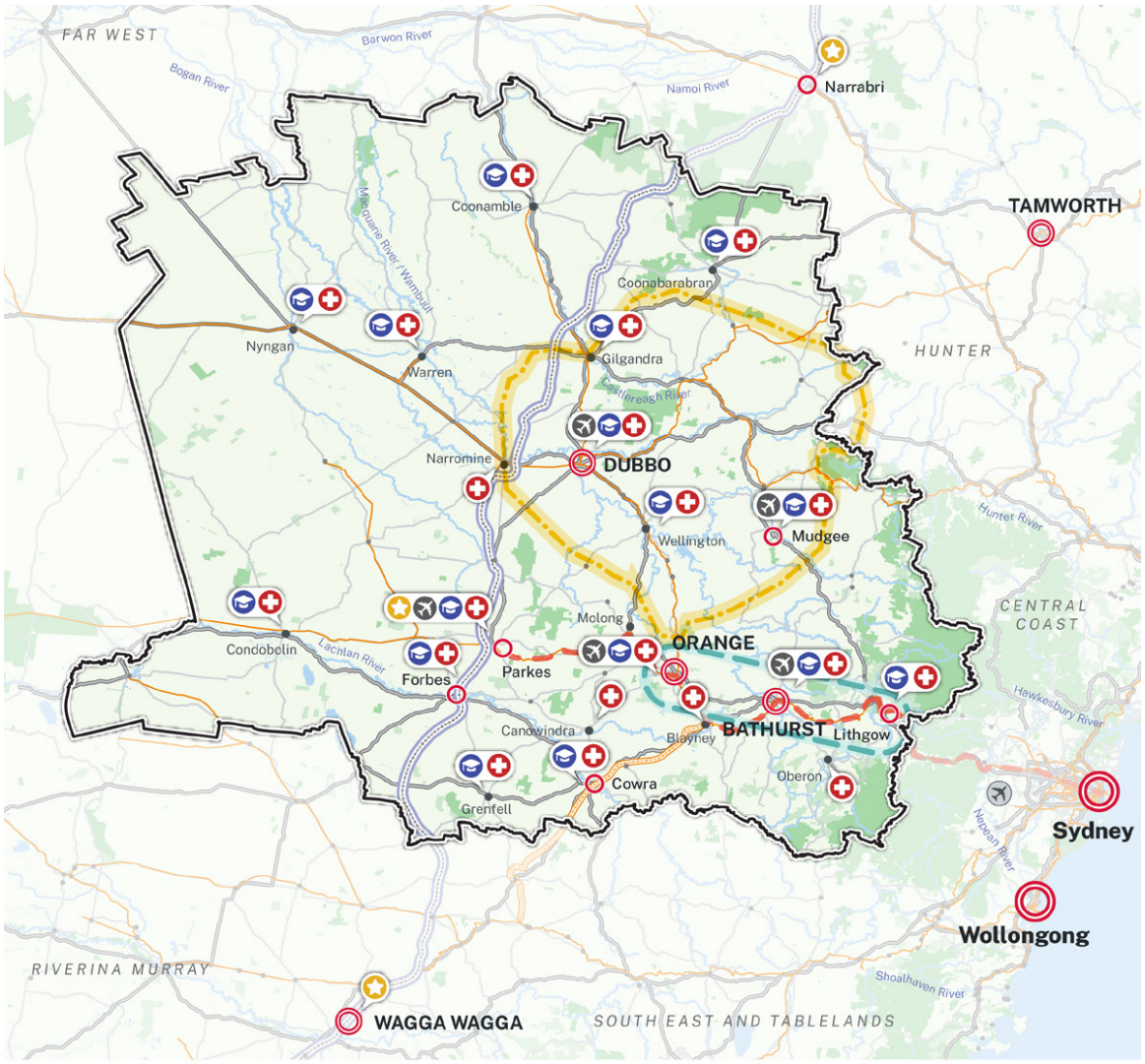


Figure 2: Vision map for the Central West and Orana

Housing Growth Context

2.2 Functional economic region characteristics

At the sub-regional scale, Orange forms the principal urban centre within the Orange, Blayney and Cabonne Functional Economic Region (FER). Council's role in supporting population, labour force and economic growth within the FER is governed by the NSW Government's Orange, Blayney and Cabonne Regional Economic Development Strategy—2023 Update. This recognises the economic importance of well-located housing supported by good place design (see Tables 2.1 and 2.2 below).

Orange's role within the FER is threefold—

1. Orange services the FER through the provision of higher order (ie, regional) health care, education, housing, recreation, retail and other services needed to support the social reproduction of labour, including many of those less tangible qualities (such as healthy and attractive urban places) that help make up the FER's "liveability" and that support the attraction of new skills, knowledge, people, enterprises and investment.
2. Orange functions as a site for economic coordination and integration (eg, "head office" and producer services) through its capacity to offer a flexible diversity of office, service industry and production settings.
3. Orange plays a leading role in setting the FER's competitive brand through its association with the FER's unique territorial identity (or sense of *terroir*). This is expressed through the combination of images, feelings and impressions that are indelibly tied to people's experiences of the FER's unique combination of scenic hinterlands, recreation assets, wineries, orchards and urban townscapes, along with its distinctive "vibe" as a rapidly maturing destination for entertainment, hospitality, food and wine, cultural events and "good living".

Table 2.1 Relevant Orange, Blayney and Cabonne Regional Economic Development Strategy—2023 Update provisions

Strategies	Enablers
Enhance the liveability of the region by ensuring the future supply of housing, stable supply of water, community infrastructure and community amenity in Orange, Blayney and Cabonne as the region's population grows.	Support investments in community spaces, services and recreation infrastructure to improve amenity, diversify the visitor economy, and support attraction and retention of a working age population.

Table 2.2 Orange, Blayney and Cabonne Functional Economic Region (FER) population change, 2016-2021

LGA	LGA Population 2016	Share of FER Population 2016	LGA Population 2021	Share of FER Population 2021	LGA Population Change 2016-2021
Orange City	40,344	66.2%	43,512	67.2%	+7.9%
Blayney Shire	7,257	11.9%	7,497	11.6%	+3.3%
Cabonne Shire	13,386	21.9%	13,766	21.3%	+2.8%
FER Total	**60,987**	**100.0%**	**64,775**	**100.0%**	**+4.7%**

Source: ABS Census

2.4 Local population and housing drivers

2.4.1 Regional city comparisons

Like other regional cities in NSW, Orange is experiencing sustained high rates of population and housing growth that, over time, imply fundamental changes to the city's urban form, housing mix and place qualities (see Table 2.3 below).

An important consideration for Orange in this regard is the relatively small geographical size of its LGA when compared to other NSW regional cities. As well as having one of the state's highest annual rates of regional population growth, the City of Orange is by far and away the most densely populated inland regional city LGA in NSW (153.1 people/km²). In recent years, Orange's sustained high rates of attraction and growth have become entwined with the city's emergence as the leading agribusiness, health, education, lifestyle and tourist hub for inland NSW, a role that is expected to deepen into the future.

Table 2.3 NSW regional city LGA population change, 2016-2021

	LGA	LGA Population 2016	LGA Population 2021	LGA Population Change 2016-2021
1	Goulburn-Mulwaree	26,609	32,053	+20.5%
2	Maitland City	77,305	90,226	+16.7%
3	Queanbeyan-Pelarang Regional	56,027	63,304	+13.0%
4	Port Macquarie Hastings	78,539	86,762	+10.5%
5	Albury (NSW) & Wodonga (Vic)	90,427	99,346	+9.9%
6	Dubbo Regional	50,077	54,922	+9.7%
7	Wagga Wagga City	62,385	67,609	+8.4%
8	Shoalhaven City	99,650	108,531	+8.9%
9	Coffs Harbour City	72,994	78,759	+7.9%
10	Orange City	40,344	43,512	+7.9%
11	Tweed Shire (NSW)	91,371	97,392	+6.6%
12	Tamworth Regional	59,663	63,070	+5.7%
13	Griffith City	25,641	27,086	+5.6%
14	Bathurst Regional	41,300	43,567	+5.5%
15	Lismore City	43,135	44,334	+2.8%
16	Armidale Regional	28,587	29,124	+1.9%
17	Broken Hill City	17,708	17,588	-0.7%

Source: ABS Census

Housing Growth Context

2.4.2 Local growth drivers

Population and housing forecasts used to support the Orange Local Housing Strategy ("OLHS", adopted 7 June 2022) were based on 2016 ABS Census data. These predicted that the City of Orange LGA's population would grow to 52,000 by 2041, requiring the City's functional housing stock to grow by 6,091 dwellings between 2016 and 2041.

The OLHS' projections have since been qualified by the more recent release of 2021 ABS Census data and the NSW Department of Planning, Housing and Infrastructure's 2022 NSW Population Projections. In addition, a more localised housing needs assessment has recently been undertaken in relation to Council's Redmond Place Precinct (Atlas Economics, July 2024). While not directly applying to the Witton Place Candidate Area, this latter assessment nevertheless provides important insight into the strategic justification and need for significantly greater housing diversity within the City's urban release areas.

Taken together, the data referred to above indicate a projected population size of 51,161 for the City of Orange by 2041, requiring an increase in the size of the City's functional housing stock of 5,630 dwellings (see Table 2.4 below). This equates to an average annual net demand for 282 additional dwellings up to 2041, a rate that is higher than the annual average construction rate of 273 dwellings witnessed between 2011 and 2010. It is worth noting that the implied dwelling requirement for the City in 2021 was 19,098 dwellings, indicating a shortfall of 428 dwellings in the City's existing housing stock (18,670 dwellings) at that time.

Table 2.4 Implied future dwelling requirements for the City of Orange LGA, 2031 and 2041

Existing Dwellings (2021)	Dwellings Required (2031)	Dwellings Required (2041)	Net Additional Dwellings Required (2021-2041)
18,670	21,897	24,300	5,630

Source: NSW Department of Planning, Housing and Infrastructure and Atlas Economics (July 2024)

Table 2.5 Projected share of household types for the City of Orange LGA (2021-2041)

	Year				
Household Type	**2021**	**2026**	**2031**	**2036**	**2041**
Lone person	25.6%	26.3%	26.7%	26.9%	27.1%
Couple only	28.6%	29.2%	29.6%	30.0%	30.3%
Single parent	12.1%	11.8%	11.7%	11.6%	11.5%
Couple with children	28.6%	27.9%	27.3%	26.8%	26.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Atlas Economics (July 2024)

In addition, the more recent analysis highlights the importance of looking beyond the delivery of overall dwelling numbers to consider the finer grain aspects of the City of Orange's future housing needs. In particular, the analysis highlights the following—

- A continuing decline in household sizes, with over 60% of households within the City of Orange now comprising one- or two-person households. Over 50% of smaller households (couple only or lone person households) comprise people over the age of 60 years, reflecting a large downsizer population (see Table 2.5).
- A continuing deterioration in housing affordability, with growth in the proportion of households spending more than 30% of household income on housing (mortgage repayments or rent).
- Structural misalignment across the City of Orange's existing housing stock, with this being dominated by large, detached dwellings (84%), leading to a clear misalignment between dwelling and household sizes. While smaller households generally prefer to live in smaller dwellings, there are far fewer opportunities to do so in the City of Orange than should be available.
- The large and growing proportion of smaller households includes significant numbers of older residents (downsizers) and young first home buyers aged 20-29 years. This emphasises the need for the City's housing stock to be adaptable to meet a range of housing needs across people's lifetimes, including the need to consider "ageing in place" principles.

A further dimension highlighted by the more recent housing analysis is the importance of understanding the relationship between housing choice and place quality. This brings in to play the strategic role of urban design in establishing the structural capacity of new neighbourhoods and urban precincts to cater for housing diversity at scale and through time. This not only helps to ensure new places respond effectively to site qualities and social needs, but also realise their potential in unlocking social and economic value.

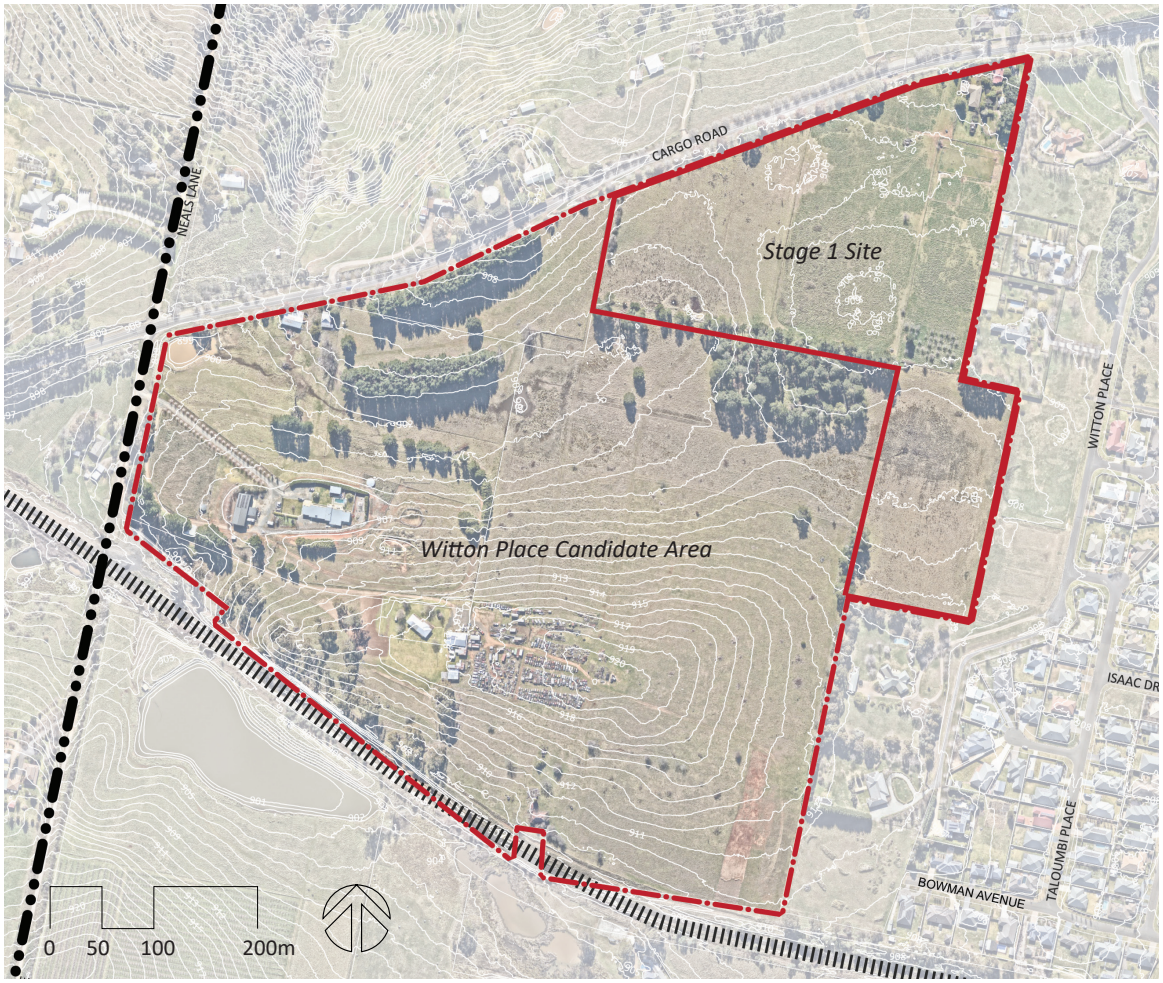
3 Site Analysis

3.1 Site description

The Witton Place Candidate Area is located on the western edge of Orange's urban area and is a key visual element defining the western entrance to the city along Cargo Road (see Figure 3.1). The site is located adjacent the southern-most portion ("Area 4") of the Ploughman's Valley residential area and approximately 3 kilometres west of the Orange Central Business District (CBD).

The candidate area is bounded by Cargo Road to the north, the Sydney to Broken Hill railway line to the south and Neals Lane to the west (Figure 3.1 below).

Figure 3.1 Witton Place Candidate Area location plan



3.2 Site history

The Witton Place Candidate Area has not been subject to any site-specific assessment of Aboriginal or non-Indigenous cultural heritage values. Basic aspects of the land's historical use are discernible from historical maps and aerial photographs (see Figures 3.2 and 3.3).

The candidate area is located within the Parish of Orange, Country of Wellington. Historical parish maps from 1897 to 1967 indicate that the site comprises of 6 portions, being part 93 owned by Mr W. Burrows, Part 94 and Part 95 owned by W. Wylde, Part 9 and Part 96 owned by J. West and part 10 owned by Dan Prass.

Historically, the area is known for apple orcharding and agricultural use including pasture improvement and livestock grazing. A review of historic aerial photographs, maps and plans since the 1960s indicates the area is utilised for mixed agriculture comprising of orcharding and grazing.

Land directly to the east of the site forms part of the Ploughmans Valley, which was subject to a Master Plan in 1997 commissioned by Council. The residential land directly east of the site forms the development area known as Area 4.

Source: Preliminary Contamination Investigation (Envirowest Consulting Pty Ptd, April 2023)

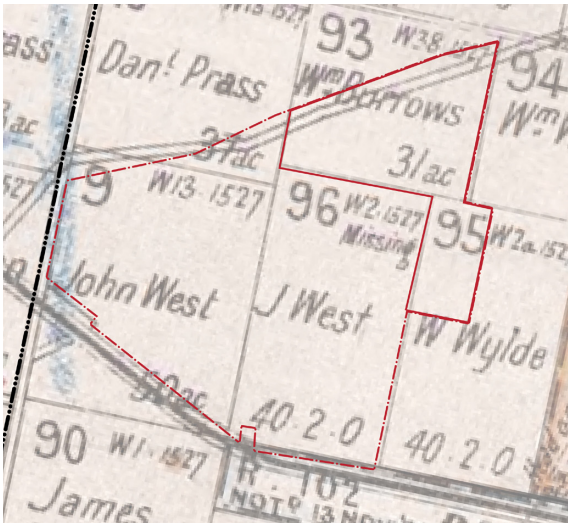


Figure 3.2 Parish of Orange (County of Wellington) Map, 1897



Figure 3.3 Orange Survey Map, 1936

Site Analysis

3.3 Natural systems

3.3.1 Geology

The Stage 1 site is located within the Towac (K—to) soil landscape (see Figures 3.4 and 3.5). This soil landscape dominates the lower slopes and flanks to the north of Gaanha bula—Mount Canobolas, and is derived from basalt flows separated by layers of volcanic ash. Landform within this soil landscape is typified by undulating to rolling low hills ranging from 980 to 1,080 metres in elevation. The dominant soil grouping within the site is Krasnomen, typified by red, deep and well-structured soils graduating to increasing clay with depth. Drainage lines flow north to Molong Creek and Heifer Station Creek.

The eastern extent of the broader Candidate Area is located within the North Orange (RE—no) soil landscape that dominates the north western extent of the City of Orange, extending north to Boomey. This landscape comprises low hills ranging from 750 to 900 metres and is dominated by Red Earth soils. Soil structure is typically weaker than within the Towac soil landscape, comprising brown to dull reddish brown fine sandy loam to loam (topsoil), graduating to dark red to reddish brown loam or fine sandy clay loam (subsoil).

Land to the south west of the Candidate Area is located within the Spring Hill (K—sh) soil landscape that dominates the southern landscapes of the City of Orange. This landscape is characterised by gently undulating to undulating rises with broad flats. Elevation ranges from 900 to 980 metres.

Source: NSW Department of Climate Change, Energy, the Environment and Water 2024, Soil Landscapes of Central and Eastern NSW, version 3.0.1.

3.3.2 Topography

The Stage 1 site and broader candidate area are located to the West of the ridgeline that forms the prominent boundary to the Ploughmans Valley area (see Figure 3.6). The land generally slopes towards to the west and contains three prominent knolls at levels of 910 metres, 911 metres and 920 metres above sea level. The site drains towards the west through a valley which forms a headwater flow path.

3.3.3 Groundwater

The Witton Place Candidate Area is identified as "groundwater vulnerable" on the Orange LEP 2011's Groundwater Vulnerability Map (see Figure 3.7). All development applications on land within the candidate area are subject to assessment in accordance with clause 7.6 of the LEP.

Groundwater within the candidate area forms part of the Orange Basalt Groundwater Source. This groundwater source is closely associated with the fertile basalt soil landscapes of the Gaanha bula—Mount Canobolas hillscapes and plains that dominate the southern half of the City of Orange's landscapes. It comprises a fractured rock groundwater source that forms part of the larger NSW Murray-Darling Basin Fractured Rock Water Resource.

Groundwater has been identified at a minimum depth of 8 metres within the Stage 1 site. Any future development of the land will be required to address any direct or indirect impacts on groundwater quality and associated groundwater dependent ecosystems.

Source: Preliminary Contamination Investigation (Envirowest Consulting Pty Ptd, April 2023).

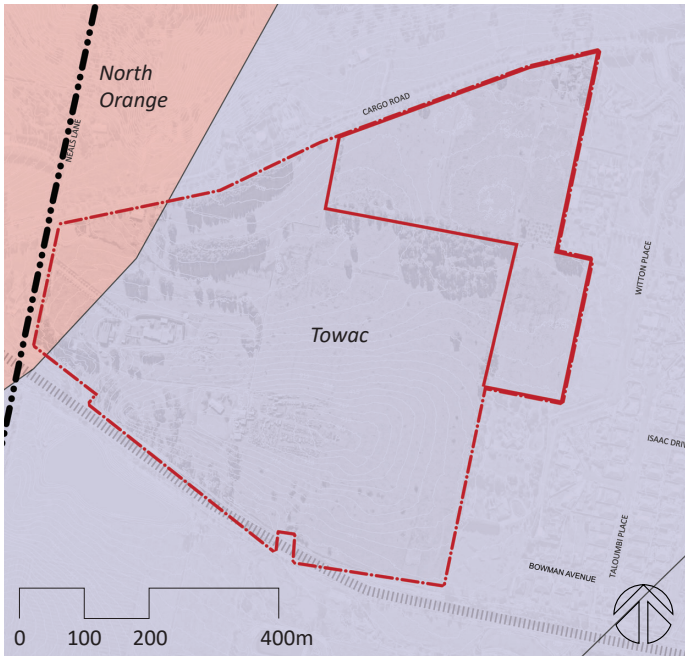


Figure 3.4 Soil landscapes

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Soil Types

- Krasnozems
- Red Earths

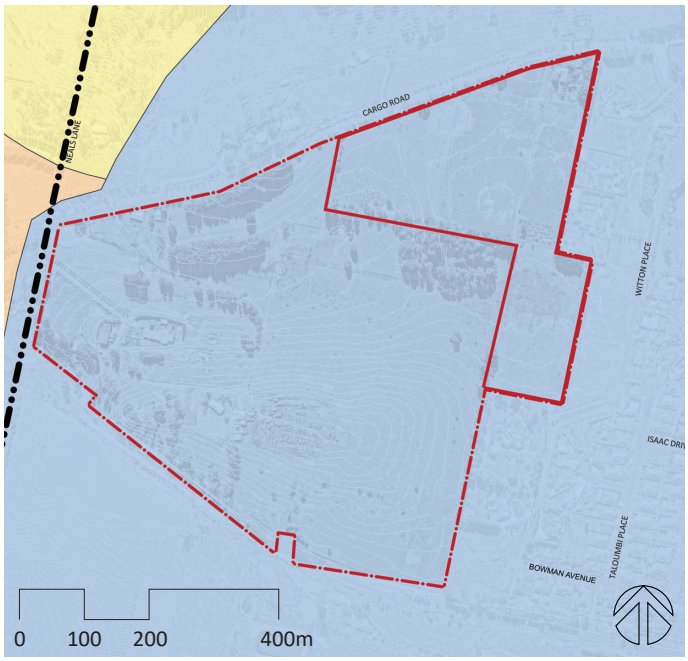


Figure 3.5 NSW hydrogeological landscapes

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Land Categories

- High Salinity
- Moderate Salinity
- Very Low Salinity

Site Analysis

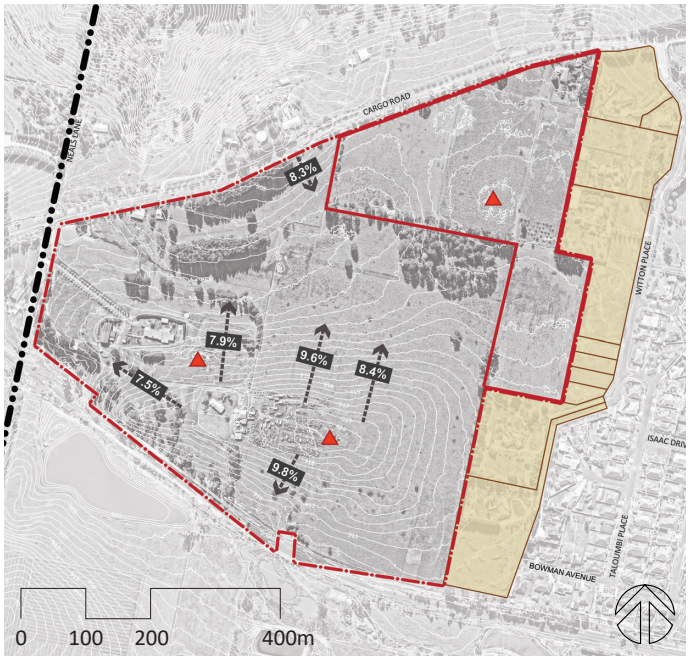


Figure 3.6 Topography

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site
- High Points
- Ridgeline

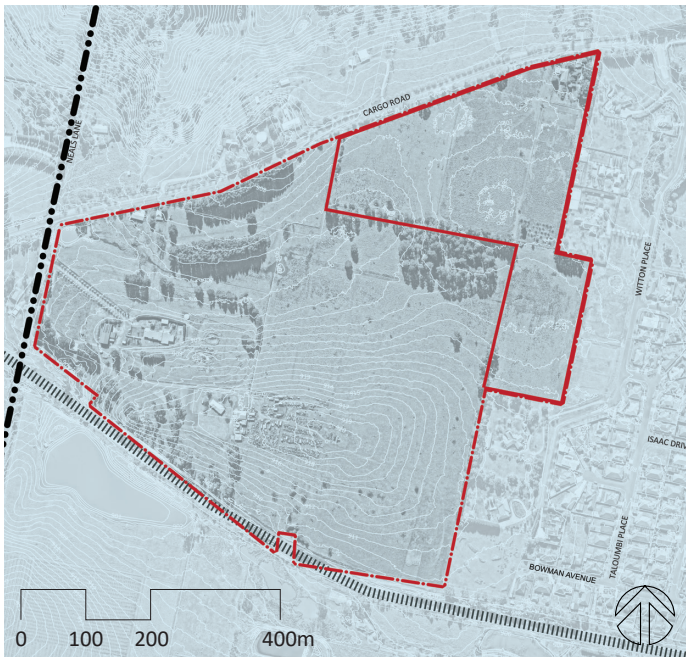


Figure 3.7 Groundwater vulnerability

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site
- Groundwater Vulnerability (Orange LEP 2011)

3.3.4 Waterways and hydrology

The Witton Place Candidate Area contains a headwater flow path, known as a first order stream under the Strahler stream ordering system. This stream forms part of Molong Creek catchment, within the mid-Macquarie tributaries (see Figure 3.8).

The southern most area of the Witton Place Candidate Area is identified as key fish habitat, noting that small headwater creeks are gullies that only flow for short periods are generally excluded from being identified

Source: NSW Department of Primary Industries and Regional Development (2024).

3.3.5 Biodiversity

Bioregional and subregional contexts

The City of Orange is located within the South Eastern Highlands Bioregion and Orange (SEH12) Bio-subregion as defined by the Interim Biogeographic Regionalisation for Australia (Version 7). Key features of the Orange Bio-subregion (SE12) are summarised in Table 3.1 below.

Flora

A 'Preliminary Flora and Fauna Assessment' has been prepared for the Stage 1 site (Envirowest Consulting Pty Ltd, 29 March 2023).

Within the Stage 1 site, the landscape has been extensively modified through historic orcharding practices and agricultural processes including pasture improvement and livestock grazing. Grasslands are the predominate vegetation type across the site. Small pockets of native vegetation are present, comprising Carex appressa (tall sedge) and Juncus usitatus (common rush). Gnaphalium involucratum (star cudweed) and Poa labillardierei (poa tussock) has been identified as isolated vegetation. No threatened or endangered species have been observed on the site.

Outside of the Stage 1 site, the NSW State Vegetation Type Map identifies two native vegetation plant community types in the south-western portion of the Witton Place Candidate Area. These comprise PCT 3366 (Grassy Woodlands—Central Tableland Clay Apple Box Grassy Forest) and PCT 3376 (Grassy Woodlands—Southern Tableland Grassy Box Woodland). Any future planning proposals for this land will be required to be supported by a Flora and Fauna Assessment (see Figure 3.9).

Table 3.1 Key features of the Orange bio-subregion (SE12) (Source: *The Bioregions of New South Wales: Their Biodiversity, Conservation and History*, NSW National Parks and Wildlife Service, 2003)

Geology	Landform	Soilscape	Vegetation
Ordovician acid volcanics and slates and phyllites and Silurian volcanics.	Low hilly to hilly plateau with Canobolas peaks rising above.	Deep structures red and brown loams on basalt and fine metasediments.	Yellow box and Blakely's red gum with red stringybark, white gum, broad-leaved peppermint across most of the plateau.
Extensive Tertiary basalts from Canobolas and small stocks of granite.	Numerous volcanic features: plugs, dykes and domes in the Canobolas complex.	Mellow texture contrast soils on any slopes with a sand component in the bedrock.	Ribbon gum on lower slopes, snow gum in cold patches and high levels of Canobolas.
Limited limestone and serpentinite.	Karst landscapes at Borenore and Molong.	Alluvial loams and black clays in swampy valley floors.	River oak along main streams.
		Limited areas of shallow organic loams at high altitude on Canobolas.	

Site Analysis

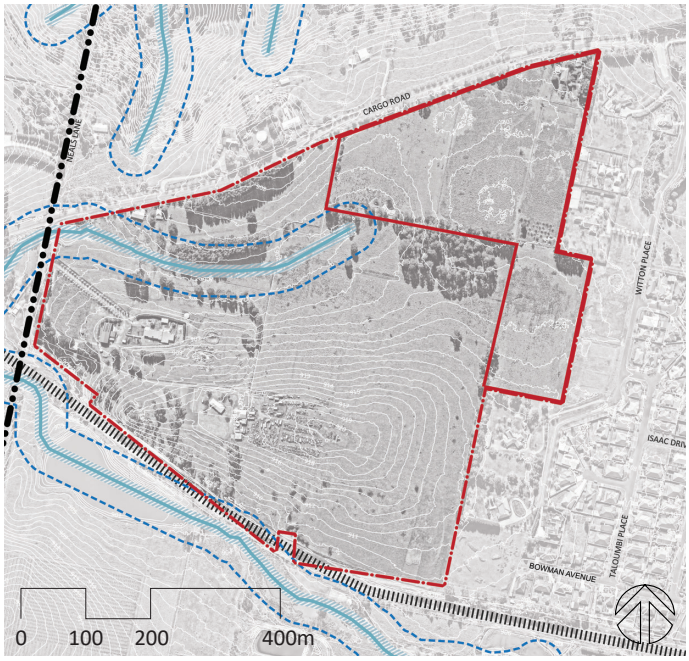


Figure 3.8 Waterways

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Waterways and Riparian Land

- Riparian Zone (40 metres)
- Strahler Stream Order 1
- Strahler Stream Order 2
- Riparian Buffer (BAM)

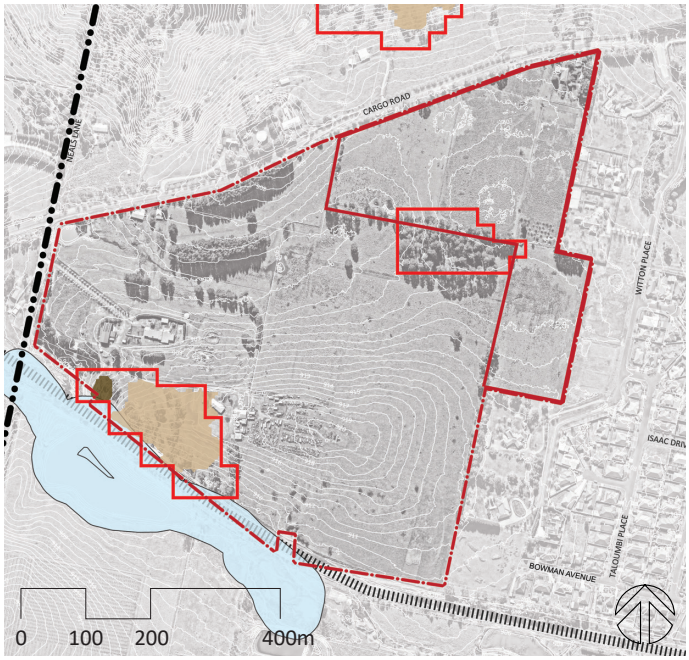


Figure 3.9 Terrestrial and aquatic biodiversity

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Biodiversity

- Terrestrial Biodiversity—High Sensitivity (Orange LEP 2011)
- Key Fish Habitat
- PCT 3366 (Grassy Woodlands—Central Tableland Clay Apple Box Grassy Forest)
- PCT3376 (Grassy Woodlands—Southern Tableland Grassy Box Woodland)

Fauna

Habitat attributes for the Regent Honeyeater, Bush Stone-Curlew, Speckled Warbler, Brown Treecreeper, White fronted Chat, Little Eagle, Booroolong Frog, Scarlet Robin, Flame Robin, Superb Parrot, Australian Painted Snipe, Yellow Bellied Sheath-Tail Bat and the Diamond Firetail are present within the Stage 1 site. The relatively small extent of habitat and the availability of alternative habitat sites within the surrounding locality indicate that there is likely to be limited habitation within the site. No threatened fauna species have been identified within the Stage 1 site.

Source: 'Preliminary Flora and Fauna Assessment' (Envirowest Consulting Pty Ltd, March 2023).

3.3.6 Climate

Orange has a cool temperate climate, experiencing cold wet winters and warm dry summers. High temperatures peak in January at an average of 26.6 °C and low temperatures dip in July to an average of 1.6°C. The city's climate, including annual rainfall, are strongly influenced at the local scale by the geomorphology of the Gaanha bula—Mount Canobolas volcanic complex. Among other factors, the mountain and adjoining elevated foothills are subject to higher average annual rainfall (900-949mm) than surrounding landscapes. Data from Orange Airport indicates an average annual rainfall of 945mm. Rainfall is most significant in November with an average of 94.1mm, April being the driest month of the year with an average of 45.3mm (see Figures 3.10 and 3.11).

Availability of soil moisture is lowest in summer and not usually limiting in winter when rainfall exceeds evaporation. Low winter temperatures restrict plant growth from May to September so that plan growth is most active during Spring and Autumn.

Climate change projections for NSW are prepared by the NSW and Australian Regional Climate Modelling (NARCliM) project and published by the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW). Current projections for the Witton Place Candidate Area are sourced from the Adapt NSW online Climate Projections Map and are summarised in Table 3.2 below. These indicate significant long term structural changes to the local climate, whether under 'Low' or 'High' modelling scenarios. In general, the projections indicate an increase in average mean, minimum and maximum temperatures, a substantial reduction in average rainfall. These changes will coincide with an increase in the number of hot days (35°C or above) during summer and a substantial decrease in cold nights (below 2°C) in winter. These latter trends in particular place great importance on the need for urban cooling to be considered as part of the urban design response for the candidate area.

Site Analysis

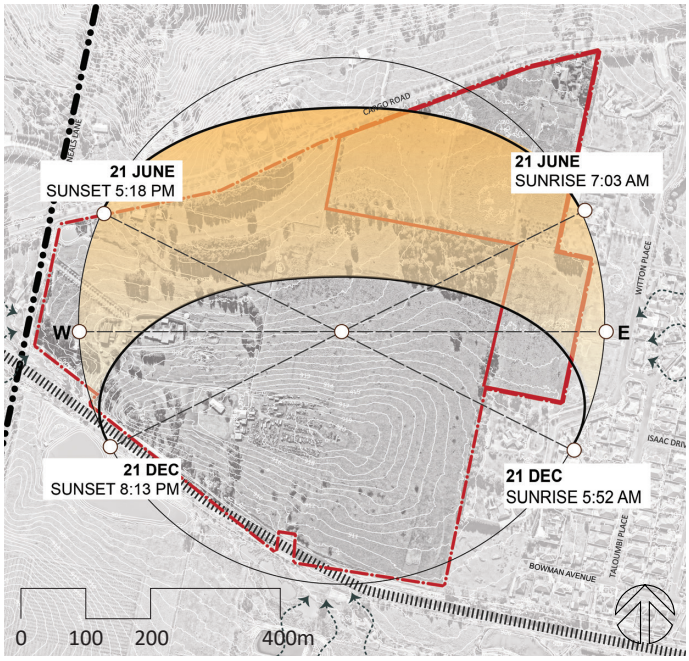


Figure 3.10 Local climate

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site
- Prevailing Winds

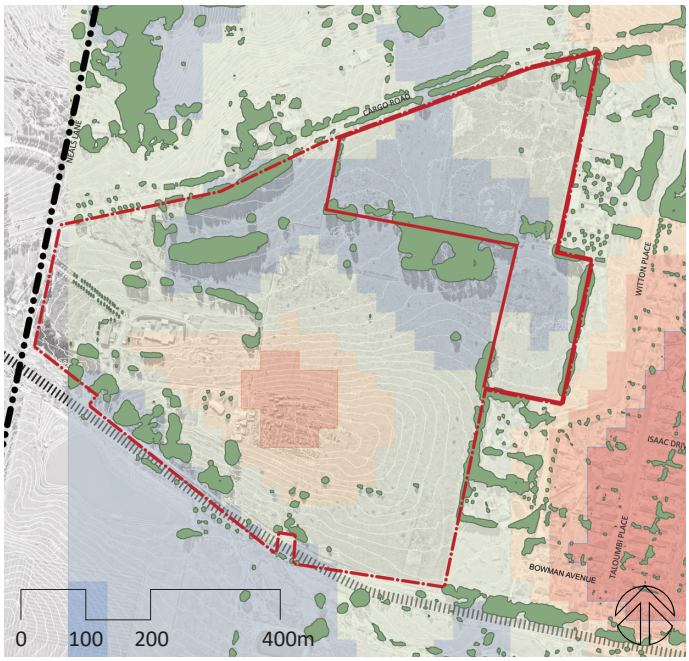


Figure 3.11 Urban heat (Landsat 8 thermal imaging, February 2022)

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Urban Heat (2022)

- Reference Band
- 0- 1.7
- 1.7- 2.9
- 2.9- 4.2
- 4.2- 5.3
- 5.3 >

Table 3.2 Climate change projections (NARCliM) for the Witton Place Candidate Area, 2030-49 and 2080-99

	2030-49		2080-99	
	Low Emissions (SSP1-2.6)	**High Emissions (SSP3-7.0)**	**Low Emissions (SSP1-2.6)**	**High Emissions (SSP3-7.0)**
Change in average mean temperature				
Summer (Dec-Feb)	+1.40°C	+1.67°C	+1.77°C	+4.41°C
Winter (Jun-Aug)	+0.73°C	+1.10°C	+1.02°C	+3.34°C
Annual (Jan-Dec)	+1.07°C	+1.37°C	+1.43°C	+4.04°C
Change in average maximum temperature				
Summer (Dec-Feb)	+1.54°C	+1.86°C	+1.92°C	+4.58°C
Winter (Jun-Aug)	+0.75°C	+1.19°C	+1.03°C	+3.54°C
Annual (Jan-Dec)	+1.16°C	+1.49°C	+1.51°C	+4.22°C
Change in average minimum temperature				
Summer (Dec-Feb)	+1.24°C	+1.50°C	+1.58°C	+4.28°C
Winter (Jun-Aug)	+0.70°C	+1.02°C	+1.00°C	+3.17°C
Annual (Jan-Dec)	+0.98°C	+1.26°C	+1.33°C	+3.85°C
Change in average rainfall				
Summer (Dec-Feb)	-7.76%	-11.53%	-12.29%	-1.02%
Winter (Jun-Aug)	-7.09%	-6.55%	-1.42%	-19.42%
Annual (Jan-Dec)	-8.95%	-8.55%	-9.59%	-14.30%
Change in hot days (35°C or above)				
Summer (Dec-Feb)	+2.94 days	+3.93 days	+4.44 days	+15.64 days
Winter (Jun-Aug)	+0.00 days	+0.00 days	+0.00 days	+0.00 days
Annual (Jan-Dec)	+3.18 days	+4.39 days	+4.97 days	+19.82 days
Change in cold nights (below 2°C)				
Summer (Dec-Feb)	-0.07 days	-0.05 days	-0.06 days	-0.08 days
Winter (Jun-Aug)	-10.16 days	-14.85 days	-14.09 days	-42.79 days
Annual (Jan-Dec)	-17.11 days	-23.13 days	-24.09 days	-62.47 days
Severe fire weather days (FFDI above 50)				
Summer (Dec-Feb)	+0.31 days	+0.25 days	+0.50 days	+1.44 days
Winter (Jun-Aug)	+0.00 days	+0.00 days	+0.00 days	+0.00 days
Annual (Jan-Dec)	+0.35 days	+0.40 days	+0.67 days	+2.30 days

Source: Adapt NSW Climate Projections Map (https://www.climatechange.environment.nsw.gov.au/projections-map), accessed 1 November 2024.

Site Analysis

3.4 Hazards and risk management

3.4.1 Drinking water catchment

The Witton Place Candidate Area is located within the Molong Dam Drinking Water Catchment (see Figure 3.12). Molong Dam is operated by Cabonne Council and is the primary town water source for Molong, Cumnock and Yeoval. The Cabonne Settlement Strategy 2021-2041 (May 2021) contains the following provisions regarding the Molong Dam Drinking Water Catchment—

Drinking Water Catchment: Settlement growth should seek to minimise or mitigate development of land in key drinking water catchments, particularly the Molong Creek/Dam catchment, unless higher standards of water management demonstrate impacts can be avoided or mitigated.

The drinking water catchment status of the land means that water quality management infrastructure will need to be incorporated into the public open space planning for the candidate area.

3.4.2 Biophysical Strategic Agricultural Land

The Stage 1 site is mapped as Biophysical Strategic Agricultural Land ("BSAL") on the NSW Government's Biophysical Strategic Agricultural Land Map (see Figure 3.13). BSAL represent landscapes with high quality soil and water resources capable of sustaining high levels of agricultural productivity. The Towac and Spring Hill soil landscapes that dominate the southern half of the City of Orange are generally considered to comprise BSAL.

Source: NSW Department of Planning and Environment 2013, Biophysical Strategic Agricultural Land Map.

3.4.3 Flood risk

The Witton Place Candidate Area and Stage 1 site are located outside of the study area for the Blackmans Swamp Creek and Ploughmans Creek Floodplain Risk Management Study and Plan (Lyall & Associates, December 2020) (see Figure 3.14). Flood risk will need to be addressed as part of any future development application to subdivide the Stage 1 site, and will need to be addressed as part of any future planning proposal for other land within the Witton Place Candidate Area.

Source: Blackmans Swamp Creek and Ploughmans Creek Floodplain Risk Management Study and Plan (Lyall & Associates, December 2020).

3.4.4 Bush fire

Land within the Stage 1 site and broader Witton Place Candidate Area is identified as having bush fire potential on the NSW Bush Fire Prone Land Map (see Figure 3.15). Land is categorised as Vegetation Category 1 (Forest, woodlands, heaths (tall and short), forested wetlands and timber plantations) and Vegetation Category 3 (Grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands). The inclusion of the land on the NSW Bush Fire Prone land Map is a trigger for development proposals to undertake site-specific assessment of bush fire risk, including the determination of any management measures required under Planning for Bush Fire Protection (NSW Rural Fire Service, November 2019).

A 'Bushfire Strategic Assessment' (Barnson Pty Ltd and Envirowest Consulting Pty Ltd, 30 May 2024) has been undertaken for the Stage 1 site. This identifies the need for Asset Protection Zones (APZs) to facilitate residential development within the Stage 1 site (25 metres for land adjoining Vegetation Category 3 land and 11 metres for land adjoining grassland).

Source: Bushfire Strategic Assessment (Barnson Pty Ltd and Envirowest Consulting Pty Ltd, May 2024).

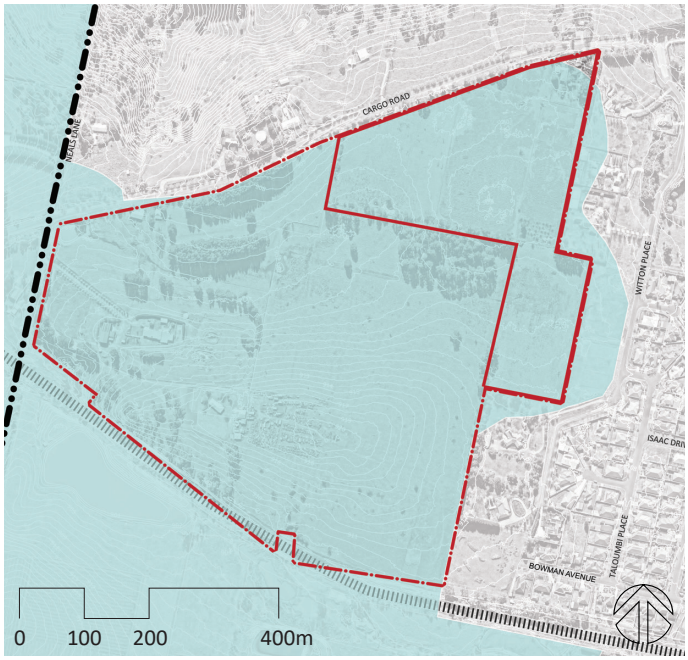


Figure 3.12 Drinking water catchment

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site
- Drinking Water Catchment (Orange LEP 2011)

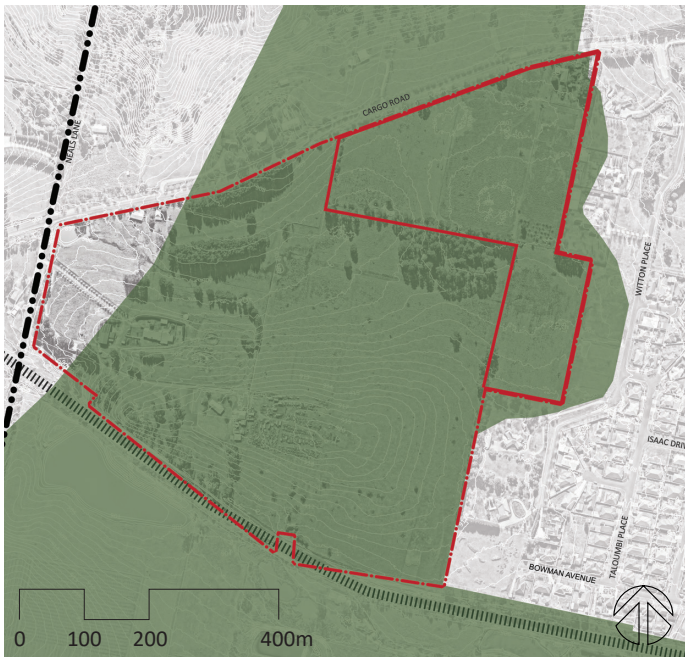


Figure 3.13 Biophysical strategic agricultural land

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site
- Biophysical Strategic Agricultural Land

Site Analysis

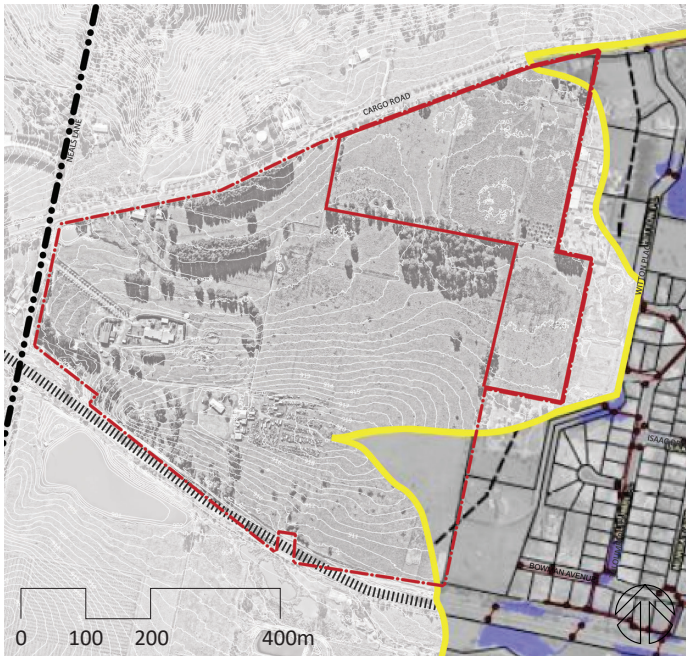


Figure 3.14 Flood risk

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Flood Planning (BSC&PC FRMP&S, December 2020)

- Catchment Boundary
- FRM Plan Study Area Boundary
- Probable Maximum Flood (PMF)
- Flood Planning Area (Mainstream)
- Flood Planning Area (Overland Flow)

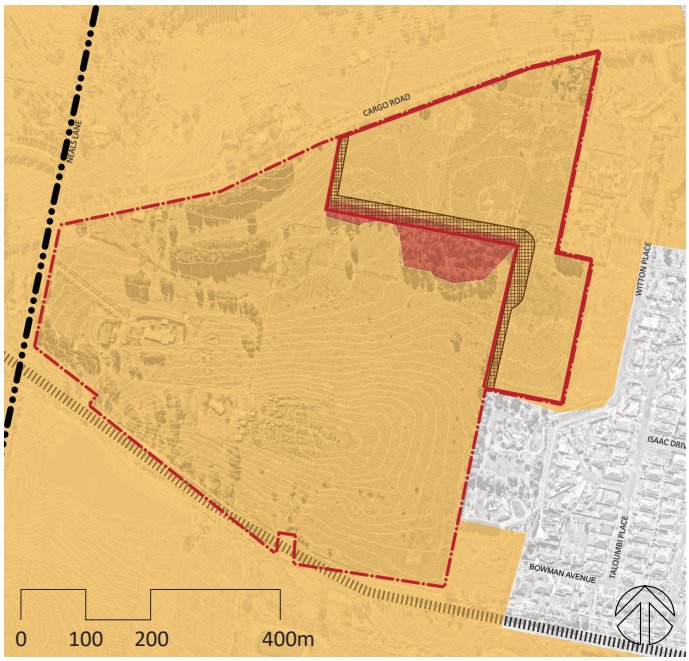


Figure 3.15 Bush fire prone land

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Bush Fire Prone Land

- Vegetation Category 1
- Vegetation Category 3
- Asset Protection Zone (APZ)

3.4.4 Contamination

Due to the historic use of land within the Witton Place Candidate Area for agricultural and other specified purposes, remediation of the land is likely to be required in order to enable residential development on the land. A 'Preliminary Contamination Investigation' (Envirowest Consulting Pty Ptd, 14 April 2023) has been prepared for the Stage 1 site. This identifies the need for a Remediation Action Plan to accompany any future development application for future subdivision of the site.

Source: Preliminary Contamination Investigation (Envirowest Consulting Pty Ptd, April 2023).

3.5 Scenic protection and views

The Witton Place Candidate Area is located on the western entry into the City, which is currently characterised by planted rows of fruit, cedar and oak trees, which provide a buffer from viewing into and across the site (see Figure 3.16).

The broader area and the site are nominated as a Scenic Protection Zone under Council's Development Control Plan due to the height of the site. Larger lots present along the ridgeline of Witton Place creating a visual buffer to any development that occurs to the west.

Key views into the site are located at Neals Lane and from Witton Place and Bowan Avenue. Views to Gaanha Bula—Mount Canobolas are located within the site.

3.6 Cultural heritage

3.6.1 Aboriginal cultural heritage

The Stage 1 site is not identified within the Orange Aboriginal Heritage Report (OAHR) as a site of significance, located on a major watercourse or on land with significant topography or natural features. An AHIMS search was conducted with a 200m buffer, and no Aboriginal sites or places are recorded or have been declared in the search area. Future Development Applications for the site will need to be supported by an Archaeology Technical Report and engagement with the Orange Local Aboriginal Lands Council is required.

3.6.2 Non-Indigenous cultural heritage

Several items of local heritage significance are located in the vicinity (ie, within 1 kilometre) of the Witton Place Candidate Area. These are described in Figure 3.17 and Table 3.3 below.

Site Analysis

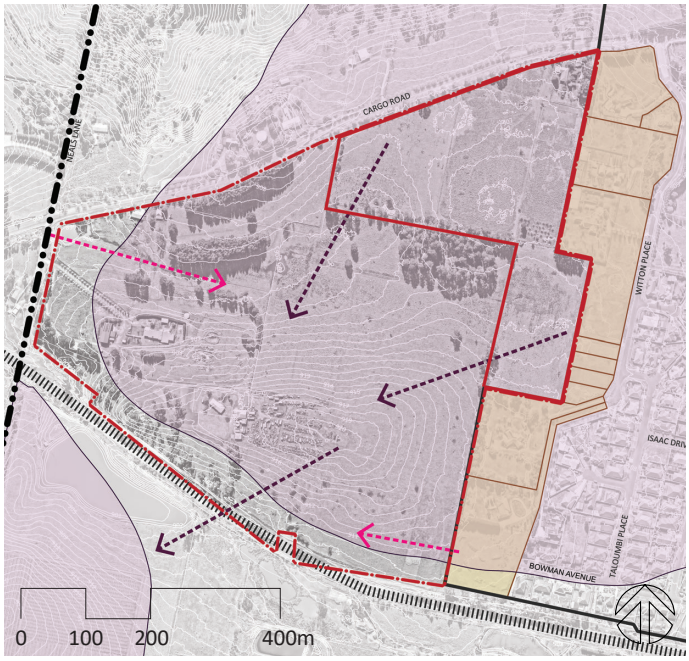


Figure 3.16 Scenic protection and views

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Soil Types

- Views into the site
- Views to Gaanha Bula—Mount Canobolas
- Scenic Protection Zone (Orange DCP 2004)
- Ridgeline

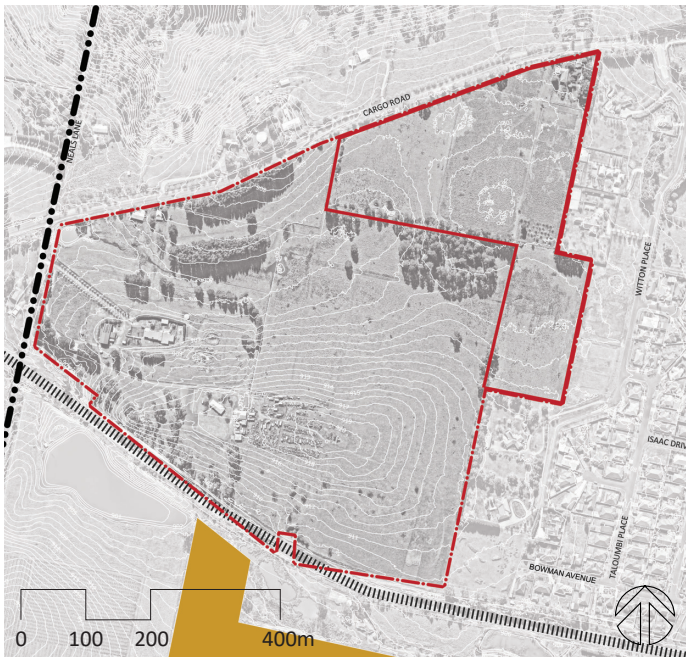


Figure 3.17 Cultural heritage

Key

- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site
- Heritage Item (Orange LEP 2011)

Table 3.3 Listed heritage items located in the vicinity of the Witton Place Candidate Area

Item Number	Significance	Name	Address	Description
I19	Local	"Glengarra" homestead	84 Mount Pleasant Lane	A substantial house from the Federation period, retains the distinctive original features and is set within a planned garden including mature plantings, complements streetscape and is a visual landmark in the area.
I324	Local	Rossi Orchard (brick barn and shed)	98 Mount Pleasant Lane	A pair of rare vernacular agricultural buildings probably associated with orcharding which retain their original character and complement the setting. The buildings comprise of a small timber framed, weatherboard and fibro clad building with corrugated iron gable roof and enclosed verandah, independent brick chimney. The second structure to the rear of large steel-clad sheds appears to be a multi-level brick storage barn with corrugated iron roof.
I325	Local	"Mount Pleasant" house and barn	101 Mount Pleasant Lane	A pair of large attached residential spaces including an earlier Edwardian residence with later inter-war extension, the site retains the original character and complements the rural setting.
I59	Local	"Melrya House"	119 Ploughmans Lane	The buildings retain their original Victorian character including distinctive roof form and skylight and perimeter verandahs and are complemented by a substantial garden including early planting. An excellent example of building of this period. Main house is unaltered.
I195	Local	"Carwoola" brick sheds	4 Gartrell Way	A pair of brick ancillary buildings that are rare within the area for their retention after being adapted for accommodation and storage and remain capable of interpretation.

Site Analysis

3.7 Movement networks

3.7.1 Street network

The Witton Place Candidate Area currently has direct street frontage only to Cargo Road (north) and Neals Lane (west). Cargo Road is a classified regional road, and a 'Conceptual Intersection Layout' has been submitted in support of the planning proposal for the Stage 1 site.

Initial site analysis for the candidate area has identified the potential for new east-west street connections to Bowan Avenue and Witton Place. These would be subject to future development applications and the agreement of the respective landowners (see Figure 3.18).

3.7.2 Pedestrian and cycle networks

An existing shared path is located along Cargo Road linking Witton Place to the Ploughmans Wetlands in the east. This link forms part of a larger planned connection that will ultimately link Cargo Road to Orange's wider shareway network. It is noted that the transport analysis submitted in support of the planning proposal for the Stage 1 site proposes the extension of this existing Cargo Road shared path along the candidate area's northern boundary.

3.7.3 Public transport

The 537 bus route operates to the east of the candidate area, travelling along Witton Place, Isaac Drive, Murray Avenue and Bowman Avenue. This route forms a loop servicing Ploughmans Valley Areas 3 and 4, and links this to the Orange City Centre/ Orange Central Square area within the Orange CBD via Coronation Drive and Summer Street. The 537 route operates seven times a day Monday to Friday (6.58am, 8.58am, 10.58am, 12.58pm, 2.28pm, 4.28pm and 5.28pm) and five times on Saturday (8.58am, 10.58am, 12.58pm, 2.58pm and 4.58pm).

3.8 Land use and urban form

3.8.1 Cadastral pattern

The candidate area's present-day cadastral pattern has generally remained substantially the same since its subdivision in the late nineteenth century. Some of the eastern-most portions of the original land subdivision are now incorporated into the adjoining Ploughmans Valley neighbourhood (Area 4) (see Figure 3.19).

3.8.2 Land use zoning

The candidate area is currently zoned C3 Environmental Management and RU1 Primary Production. Land within the candidate area is subject to a minimum lot size standard of 100 hectares under the Orange LEP 2011 (see Figure 3.20).

3.8.3 Built form

The adjoining southern area of Ploughmans Valley is characterised by single lot dwelling houses as the dominant housing type. Dwelling houses are typically set back at least 5.5 metres from the front boundary of each lot. These include a large proportion of 4-5 bedroom dwellings. The primary material used throughout the area is brick, with some houses rendered. Land adjoining the candidate area immediately to the east is subdivided into larger lots located along the Witton Place ridgeline (see Figure 3.21).

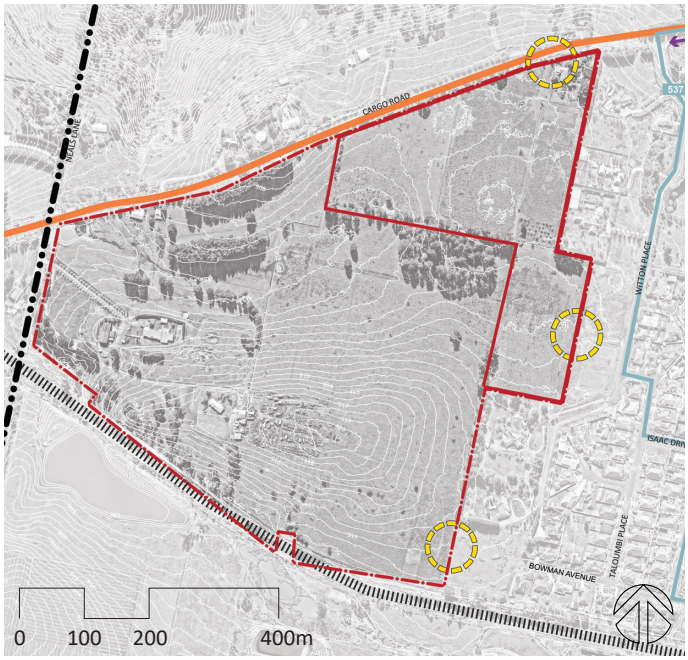


Figure 3.18 Movement networks

Key
- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Movement Networks
- Regional Road
- Shared Path
- 537 Bus Route
- Potential Road Connections (Orange Local Housing Strategy, June 2022)

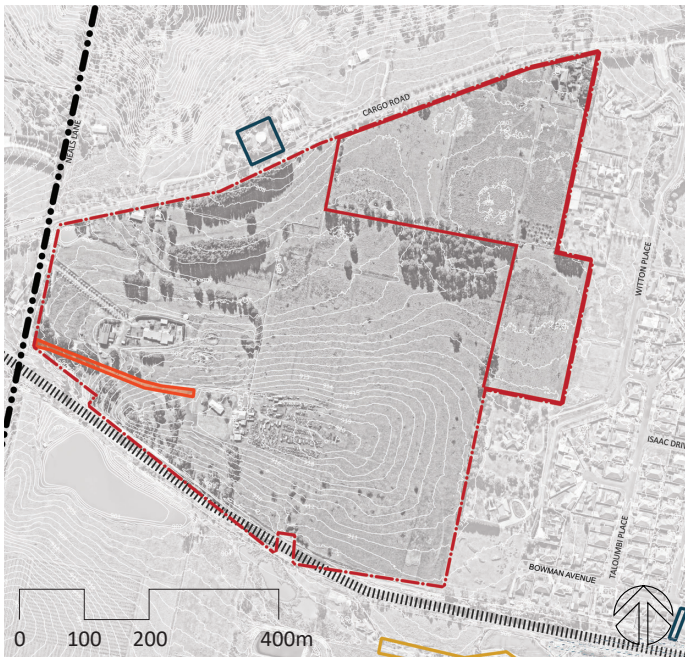


Figure 3.19 Ownership and easements

Key
- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Land Categories
- Council-owned Land
- Crown Land
- Easement

Site Analysis

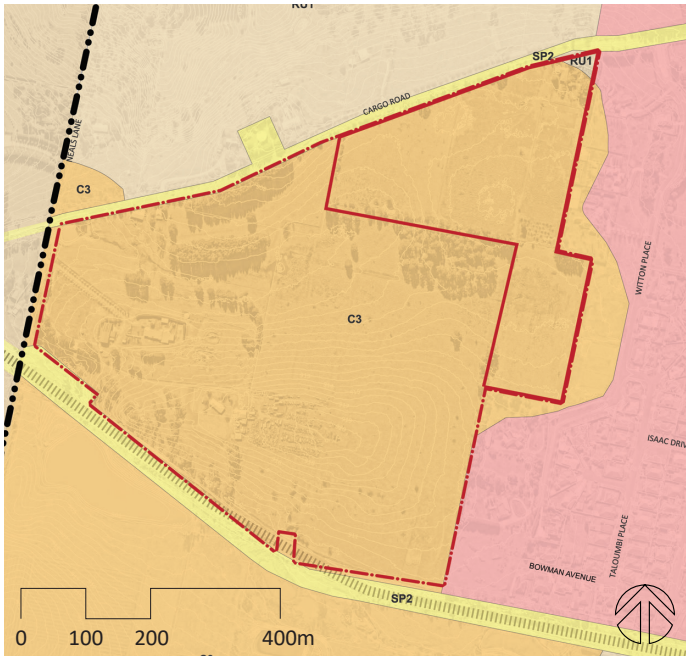


Figure 3.20 Land use zoning

Key
- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Land Use Zones
- C3 Environmental Management
- R1 General Residential
- R2 Low Density Residential
- RE1 Public Recreation
- RU1 Primary Production
- RU2 Rural Landscape
- SP2 Infrastructure

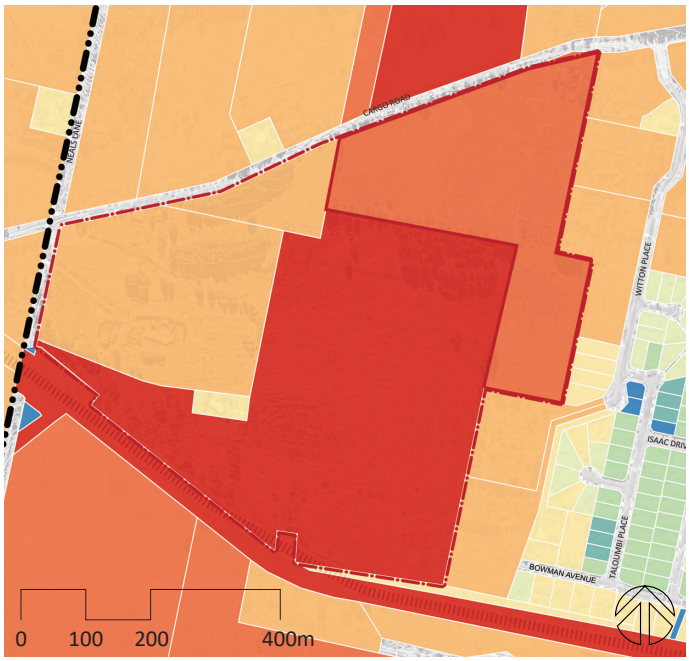


Figure 3.21 Lot sizes

Key
- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Lot Sizes
- < 800m²
- 800m² - 900m²
- 900m² - 1000m²
- 1000m² - 1500m²
- 1500m² - 1 ha
- 1 ha - 10 ha
- 10 ha - 20 ha
- > 20 ha

3.9 Social infrastructure

A range of social infrastructure facilities is available within 1 km, 2 km and 5 km of the candidate area, including:

- One playground within 1 km of the candidate area,
- the Ploughmans Valley Wetland Walk and Wetland Loop within 1km of the candidate area,
- Two pre-schools/early learning centres within 4 km of the area,
- One high school (Orange High School) within 4 km of the candidate area, and
- One primary school (Calare Public School) within 4 km of the candidate area.

There are no significant recreation facilities or social infrastructure located within convenient walking distance (400 metres) of the candidate area (see Figure 3.22).

3.10 Utilities and services

3.10.1 Water supply

The candidate area is currently serviced from the Ploughmans Valley Potable Water Booster Station, and is not within the Orange dual water supply zone. The Stage 1 site and candidate area are capable of being connected to the reticulated water supply (see Figure 3.23).

3.10.2 Sewerage

The candidate area is currently outside of existing gravity network catchments. The Stage 1 site and candidate area are capable of being connected into the network (see Figure 3.24).

3.10.3 Stormwater management

The candidate area is located outside of the outside of the Orange stormwater harvesting catchment, and currently sits within a rural catchment zone (see Figure 3.25).



Figure 3.22 Social Infrastructure

Site Analysis



Figure 3.23 Water supply infrastructure

Key
- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Water Reticulation
- Water Zone
- Water Pipes
- Water Node



Figure 3.24 Sewer infrastructure

Key
- LGA Boundary
- Witton Place Candidate Area
- Stage 1 Site

Sewer Reticulation
- Sewer Gravity Main
- Sewer Rising Main
- Sewer Pump Station
- Sewer Basin

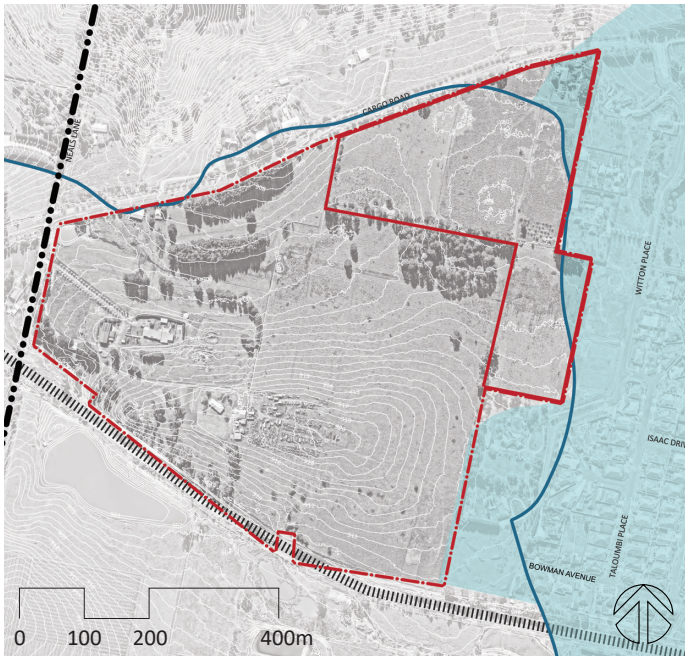


Figure 3.25 Stormwater catchments

Key

LGA Boundary

Witton Place Candidate Area

Stage 1 Site

Stormwater Catchments

Stormwater Catchment - Urban

Stormwater Catchment - Rural

4 Constraints and Opportunities

The unique landscape character, location and local context of the Witton Place Candidate Area provide opportunities for the delivery of a diverse range of housing types and settings within a framework of great place design. Realising this outcome requires a responsive approach to the analysis and prioritisation of site constraints and opportunities. These are summarised below.

Constraints		Opportunities	
Natural Systems			
C1	The candidate area contains a headwater flow path that forms part of the Molong Creek catchment (Molong Dam Drinking Water Catchment). Riparian buffers and on-site water quality treatment will be required.	O1	There is the opportunity to enhance neighbourhood character and amenity by integrating water quality management infrastructure into a connected green grid of public open space and waterways.
C2	The candidate area's hydrogeology forms part of the Orange Basalt Groundwater Source. Detailed site planning will be required to be supported by technical studies to identify direct and indirect impacts on the groundwater source and related groundwater dependent ecosystems.	O2	The site's soil landscape provides opportunities for a site-specific landscape response that guides species selection as an essential feature of neighbourhood character.
C3	A preliminary flora and fauna assessment has only been prepared for the Stage 1 site, although the remaining parts of the candidate area are known to contain significant examples of habitat. Detailed site planning for the candidate area will be required to be supported by additional biodiversity assessment reporting to identity risks and avoidance measures.	O3	There is an opportunity to retain and enhance native vegetation plant community types through appropriate site layout and ownership, including the design of the precinct's public open space network and identification of areas requiring ongoing conservation and management.
C4	The long-term impacts of climate change, including the increasing intensity and frequency of warm dry summers and extreme weather events, poses risks to human and animal health, infrastructure and landscapes and requires mitigation.	O4	There are opportunities to enhance neighbourhood character, resilience and amenity through the adopting of urban cooling measures, including— • water sensitive urban design • protection of riparian zones within the green space network • promotion of 'cool landscape' and 'cool building' design and materials • provision for urban tree canopy (public an private realms)

Constraints		Opportunities	
Hazards and Risk Management			
C5	Development will need to protect water quality within the Molong Dam Drinking Water Catchment.	O5	Water quality and flood risk management (including basins, green space and wetlands) has the potential to contribute to the character and amenity of the precinct if integrated into the public green space network.
C6	Future development will need to protect the productive potential of surrounding Biophysical Strategic Agricultural Land through appropriate buffers and land use transitions.	O6	The requirements for suitable land use and density transitions to surrounding agricultural land provide the opportunity to vary lot sizes according to their location within the candidate area.
C7	Flood studies have not been undertaken for the subject site. Development will need to ensure a neutral or beneficial post development flows.		
C8	Development will be required to address planning for bush fire protection requirements, including asset protection zones. Development within the Stage 1 site may require higher construction standards for perimeter lots.		
C9	Preliminary contamination assessment has only been carried out for land within the Stage 1 site. Remediation of this land is likely to be required in order to enable residential development.		
Scenic Protection and Views			
C10	The site forms part of the western entry into the City of Orange along Cargo Road and is nominated as a Scenic Protection Zone.	O7	There is an opportunity to preserve the low density visual character of the Cargo Road corridor through retention of the existing roadside trees and placement of larger lots along this frontage.
		O8	There is an opportunity for streets, open spaces and houses to capitalise on high quality views to Gaanha Bula—Mount Canobolas and beyond through appropriate site layout and view sharing.
		O9	The unique topography of the site provides an opportunity to align streets, public spaces and houses to the site's natural landform as an essential element of neighbourhood character.

Constraints and Opportunities

Constraints		Opportunities	
Cultural Heritage			
C11	Aboriginal cultural heritage and Connecting with Country associations with the candidate area have not been assessed in depth. There is a need to better understand if the candidate area has any archaeological significance. Further studies and engagement with local Aboriginal stakeholders (including the Orange Local Aboriginal Lands Council) is required.	O10	There are several non-Aboriginal heritage items located in vicinity of the site, some of which are partially visible from the site and reference the orcharding history. There are opportunities to acknowledge this shared history in the detailed public realm and open space design for the candidate area.
		O11	There is an opportunity for future stages of the candidate area to explore Connecting with Country opportunities with the local Aboriginal community, particularly through the design of the future public realm and open space network.
		O12	There are opportunities to protect and share public views to Gaanha Bula—Mount Canobolas and to protect existing streams and remnant native vegetation communities as important building blocks of a future Connecting with Country framework for the candidate area.
Land Use and Urban Form			
C12	The existing lot and landholding pattern within the candidate area is a potential constraint to efficient development staging and coordinated place making.	O13	The candidate area presents an opportunity for a diverse mix of sensitively located lot and housing types (ie, large lots, conventional lots and smaller lots) to enable housing affordability, ageing in place and social inclusion over time.
C13	There is limited housing variety within the adjoining Ploughmans Valley South area, which is zoned as R2 Low Density Residential. Lot sizes within the adjoining residential area vary between 800m2 and 1500m2, with lots sizes of 10 hectares located along the ridgeline in response to its scenic protection status. Concept planning will need to retain a low density interface with these areas.	O14	There are opportunities to provide new recreation and parkland within the candidate area to cater for a diverse range of local needs, serving both new residents and existing residents of Ploughmans Valley.
C14	The candidate area is not located within convenient walking distance (400 metres) of any existing recreation facilities or social infrastructure.	O15	There are opportunities to enhance local character and make better use of land fronting public open space through the sensitive location of smaller lot housing in these locations.

Constraints		Opportunities	
Movement networks			
C15	There are limited opportunities for direct connection of the candidate area to existing public road network, with potential future eastern connections (Witton Place and Bowman Avenue) requiring the establishment of public road reserves on private land.	O16	There are opportunities to improve traffic circulation and connectivity within the established Ploughmans Valley South street grid by creating new east-west street connections (Witton Place and Bowman Avenue) to the candidate area.
C16	The proposed road connection to Cargo Road (regional road) requires the consent of Transport for NSW, with no opportunities available for multiple connections. Development of the Stage 1 site will require secondary access (either to Cargo Road or Witton Place) for emergency vehicles.	O17	There are opportunities to promote active transport and reduce demand for private car use through appropriate design measures, including— • creation of a permeable street grid to disperse traffic and encourage slower driving • planning for internal and external active transport priority routes (on street and off street) • prioritisation of pedestrian convenience and safety (eg, lighting) • provision for the extension of the existing public transport (local bus) network
C17	The candidate area is poorly served by active transport (pedestrian and cycling) infrastructure, with limited opportunities to link the area with existing active transport networks limited to Cargo Road.	O18	There is an opportunity to support the use and viability of public transport and active transport routes through the appropriate location of higher density (smaller lot) and the creation of key activity nodes (recreation facilities, seating, bus stops).
C18	The likely high dependence on private cars for future residents requires mitigation measures to minimise carbon use and ensure a basic level of social inclusion and equity.	O19	Connection to the existing Cargo Road shared path is a strategic opportunity to connect the candidate area to the Orange CBD, wetlands loop and beyond.
Utilities and Services			
C19	Sewer servicing infrastructure is required to connect into the existing network.	O20	The site is capable of being connected into existing water, electricity, and other utilities.
C20	There are constraints on the ability to provide water supply above AHD 900 metres that will need to be resolved as part of future development of the candidate area.		

5 Urban Design Concept

This section describes Council's place design principles and preliminary concept plan for the Witton Place Candidate Area. These are intended to guide future planning for the candidate area, including the preparation of place-specific development controls. The place design principles and preliminary concept plan are based on the seven urban design strategies for regional NSW as described in the publication Urban Design for Regional NSW: A Guide for Creating Healthy Built Environments in Regional NSW (Government Architect New South Wales, June 2020, ISBN 978-0-6483700-6-2). These strategies and their accompanying objectives are attached as Appendix A to this report.

5.1 Place design principles

The place design principles for the Witton Place Candidate Area are described below. The principles reflect the housing growth context and the constraints and opportunities identified in sections 2 and 4 above. The place design principles aim to ensure future detailed planning responds to the unique characteristics of the candidate area and its existing Ploughmans Valley and scenic protection area contexts, while at the same time ensuring an holistic and layered approach to guiding future neighbourhood character, sustainable place-making and social inclusion in line with the housing priorities of the Orange Local Housing Strategy.

Place Design Principle	Key Elements	Urban Design Strategies for Regional NSW (Appendix A)
Principle 1—Respond to Country *Responding to Country is the starting point for good design. It means taking a Country-centred approach to place design that recognises the importance of traditional ways of connecting with and caring for the land. It also means understanding the unique landscape, cultural and ecological qualities of each site, and how these inform its 'place' as part of Country.*	1.1 Place design should prioritise opportunities for Connecting with Country in accordance with the processes, principles and design guidance described in the NSW *Connecting with Country* framework. 1.2 Place design safeguards potentially culturally significant features, including waterways and riparian zones, topographic features and views to surrounding landmarks, including Gaanha Bula—Mount Canobolas.	Strategy 1—Engage with the history and culture of places

Place Design Principle	Key Elements	Urban Design Strategies for Regional NSW (Appendix A)
Principle 2—Celebrate local character *Place design responds to the site's unique landscape and townscape qualities, and provides opportunities for great place making and a distinctive local character.*	2.1 Place design incorporates a legible hierarchy of streets and public open spaces. 2.2 Street and public open space layout supports opportunities for meeting places (activity nodes) and wayfinding. 2.3 Housing is located to face onto public open space, providing a well-designed built edge delineating the public and private realms. 2.4 Place design provides visual richness through a diversity of compatible housing types and styles, with smaller lot housing located close to amenity (eg, parks and green spaces).	Strategy 1—Engage with the history and culture of places Strategy 5—Balance urban growth
Principle 3—Protect scenic values and views *Place design preserves and enhances the unique scenic qualities and views associated with the site, including its role as a visual gateway to the City of Orange and its setting within the City's western (Canobolas sheet basalt) hillscapes.*	3.1 Place design recognises the site's setting as a visual gateway for the City. 3.2 Larger lots are located along the Cargo Road edge to preserve the road corridor's semi-rural character. 3.3 Place design views to Gaanha Bula—Mount Canobolas and surrounding rural hillscapes. 3.4 Larger lots and public open space are located in areas with higher visual prominence. 3.5 Open space is designed so that high points maintain their natural landform qualities and enable public views and vistas to Gaanha Bula—Mount Canobolas and surrounding countryside. 3.6 Streets and street blocks are oriented to enable a variety of public and private view sharing opportunities, and to maintain a strong visual connection between the site and its surrounding natural and rural landscapes.	Strategy 2—Integrate with the natural environment and landscape

Urban Design Concept

Place Design Principle	Key Elements	Urban Design Strategies for Regional NSW (Appendix A)
Principle 4—Fit with context *Place design achieves a good fit with its context, and complements and contributes to the City's wider character and liveability, including the site's established Ploughmans Valley context.*	4.1 Place design supports existing urban neighbourhoods by extending the City's green and social infrastructure, and by enabling the provision of new parks and recreational infrastructure accessible to existing residents. 4.2 Lot sizes along the candidate area's eastern edge are compatible with the established low density character of Ploughmans Valley. 4.3 Place design provides for a transition in residential lot and street block sizes along the candidate area's other edges to match in with different edge conditions (eg, Cargo Road to the north, railway line to the south). 4.4 Place design protects agricultural land through appropriate buffers and lot sizes. 4.5 Place design provides for future street connections to Witton Place and Bowman Avenue.	Strategy 5—Balance urban growth
Principle 5—Provide housing diversity and choice *Place design should provide for a diverse range of housing needs over time by enabling an adaptable mix of compatible lot sizes, housing types, tenures and affordability levels.*	5.1 Place design responds to the long-term social needs of the City, including those for housing diversity and affordability. 5.2 Street block and lot patterns enable robustness and adaptability to a variety of housing needs as these change over time. 5.3 Lot sizes and dwelling density are located to respond to variations in site qualities and topography. 5.4 Place design supports aging in place by providing for housing diversity at the neighbourhood scale. 5.5 Place design supports liveable housing outcomes in line with the *Livable Housing Design Guidelines*.	Strategy 5—Balance urban growth Strategy 6—Increase options for diverse and healthy living

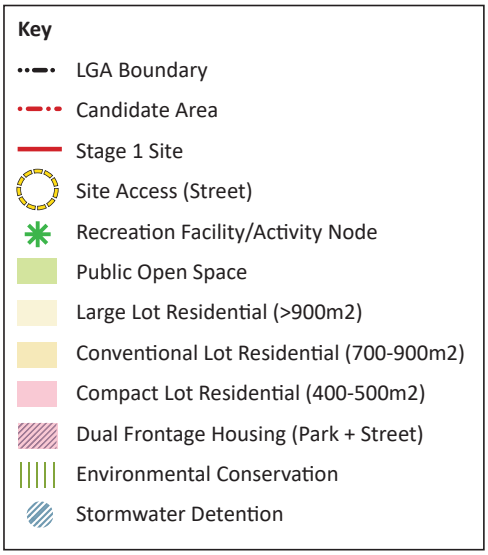
Place Design Principle	Key Elements	Urban Design Strategies for Regional NSW (Appendix A)
Principle 6—Provide connected, healthy and inclusive places *Place design fosters a sense of belonging and community, and provides for safe, walkable and beautiful streets that connect people to homes, open spaces and surrounding communities.*	6.1 Provide opportunities for play, exercise and healthy living for people of all ages and abilities. 6.2 The street network responds to topography on the site and provides for a well-connected, comfortable public domain that creates opportunities for the community to easily move within and beyond the site. 6.3 A connected open space network provides opportunities for community focal points and opportunities to gather. 6.4 Green and blue spaces and networks are incorporated as building blocks of neighbourhood character and liveability.	Strategy 2—Integrate with the natural environment and landscape Strategy 6—Increase options for diverse and healthy living Strategy 4—Prioritise connectivity, walkability and cycling opportunities
Principle 7—Design with nature *Place design prioritises the protection of biodiversity 'hot spots', including riparian zones and remnant native vegetation communities, and protects natural site features including landform, hydrology, groundwater sources and geology.*	7.1 Areas of ecological importance, including areas of significant native vegetation and habitat, are strategically identified and protected. 7.2 Topography and natural landscape elements are expressed through the formation of the street and public open space (green grid) networks, and through responsive variations in lot and street block sizes. 7.3 Waterways and riparian zones are protected by being incorporated into the public open space (green infrastructure) network.	Strategy 2—Integrate with the natural environment and landscape

Urban Design Concept

Place Design Principle	Key Elements	Urban Design Strategies for Regional NSW (Appendix A)
Principle 8—Protect water catchments *Place design should protect the drinking water catchment through the inclusion of appropriate water quality management and water sensitive urban design (WSUD) infrastructure.*	8.1 Waterways and stormwater management are integrated into the green infrastructure network. 8.2 Provision is made for appropriate water quality management infrastructure, including wetlands. 8.3 Place design is informed by total water cycle management principles. 8.4 Green and blue infrastructure supports natural rehydration of the landscape and regeneration of groundwater sources.	Strategy 2—Integrate with the natural environment and landscape
Principle 9—Sustainability and resilience *Place design should manage risks and hazards, including climate change, and promote sustainable neighbourhoods.*	9.1 Place design minimises demand for vehicle trips by incorporating a permeable and walkable street grid and public space network, optimising the feasibility of future public transport (bus) routes through the appropriate location of smaller lot housing, and by connecting to the City's strategic shared path network. 9.2 Urban heat is managed through the provision for cool landscapes at the neighbourhood scale, including the strategic allocation of green and blue spaces and provision for the incorporation of WSUD infrastructure in road reserves and other public spaces. 9.3 Place design supports the long-term expansion of the City's urban tree canopy in accordance with Council's adopted urban forest strategy.	Strategy 7—Respond to climate conditions and their impacts

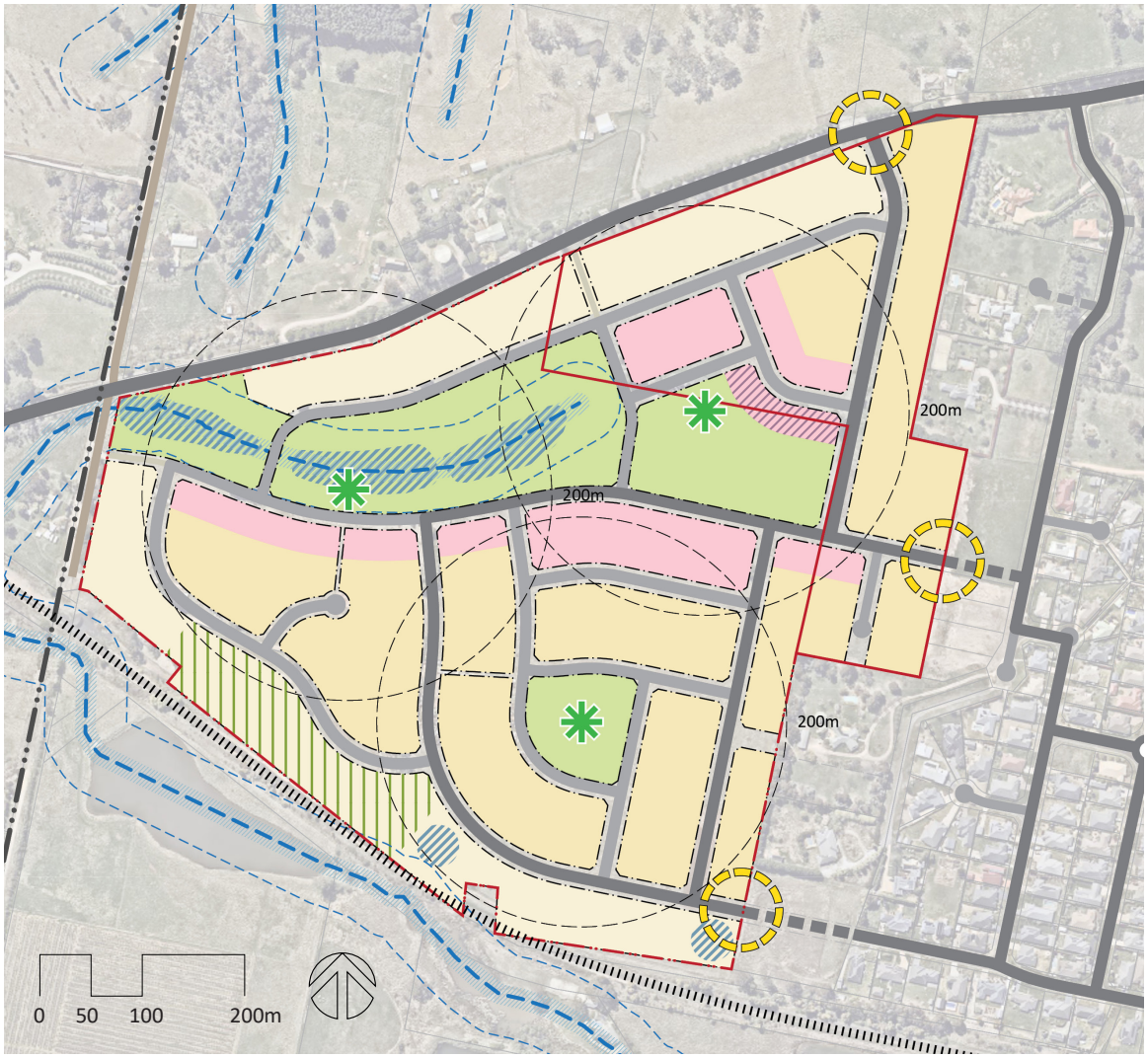
5.2 Preliminary concept plan

The preliminary concept plan for the Witton Place Candidate Area is described in Figures 5.1, 5.2 and 5.3 below. The plan embodies the place design principles described above and sets out an indicative street block, movement network, public open space and land use framework for the candidate area. This will form the basis of future detailed planning for the candidate area, including the preparation of place-specific development controls.



Urban Design Concept

Figure 5.1 Preliminary concept plan for the Witton Place Candidate Area



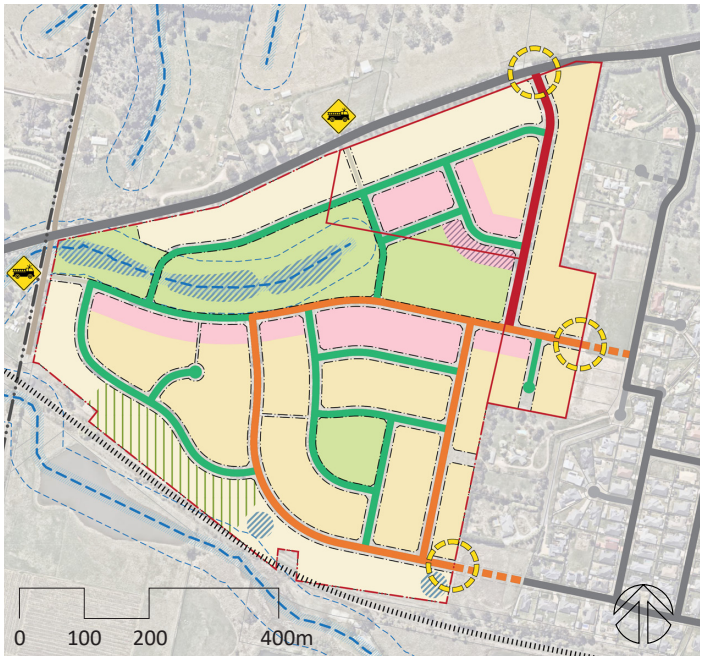


Figure 5.2 Conceptual street hierarchy

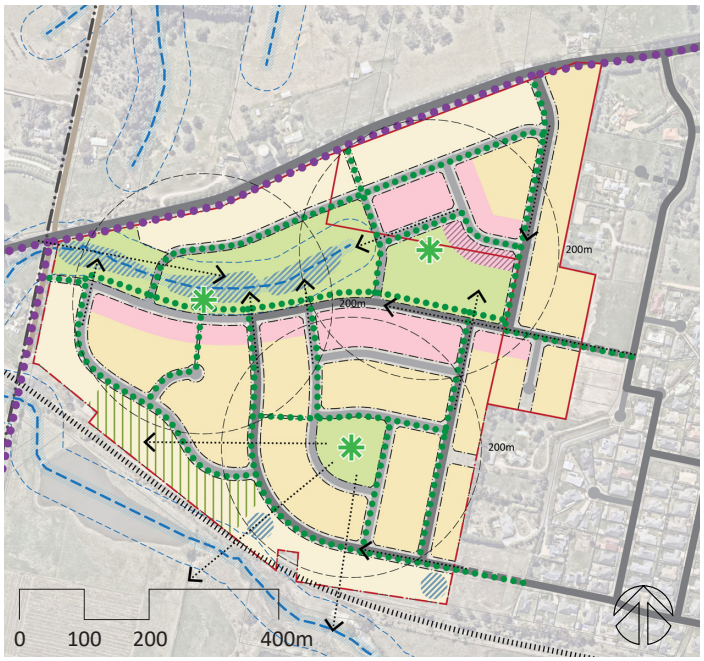


Figure 5.3 Conceptual active transport network

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Central West and Orana Regional Plan 2041 (NSW Department of Planning, Industry and Environment, December 2022, ISBN 978-1-76058-639-3)

Connecting with Country: Good Practice Guidance on how to Respond to Country in the Planning, Design and Delivery of Built Environment Projects in NSW (Government Architect NSW, November 2023)

Orange, Blayney and Cabonne Regional Economic Development Strategy—2023 Update (Department of Regional NSW, February 2023)

Urban Design for Regional NSW: A Guide for Creating Healthy Built Environments in Regional NSW (Government Architect New South Wales, June 2020, ISBN 978-0-6483700-6-2)

Planning for Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities and Developers (NSW Rural Fire Service, November 2019, ISBN 978-0-646-99126-9)

Orange City Council policies and instruments

'Blackmans Swamp Creek and Ploughmans Creek Floodplain Risk Management Study and Plan', Revision 1.2 (Lyall & Associates, adopted 1 December 2020)

Greening Orange—Our Urban Forest Strategy (Orange City Council, adopted 6 August 2024)

Orange Contributions Plan 2024 (Orange City Council, adopted 2 April 2024)

Orange Development Control Plan 2004 (as amended)

Orange Local Environmental Plan 2011 (as amended)

Orange Local Housing Strategy (Orange City Council, adopted 7 June 2022)

Orange Local Strategic Planning Statement (Orange City Council, adopted 15 September 2020)

Orange Subdivision and Development Code (Orange City Council, adopted 2 April 2024)

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'Bushfire Strategic Study—277 Cargo Road, Orange NSW' (Barnson Pty Ltd and Envirowest Consulting Pty Ltd, 30 May 2024)

'Concept Sewer Servicing Strategy—277 Cargo Road, Orange' (Heath Consulting Engineers, 13 December 2023)

'Concept Sewer Servicing Strategy Addendum' (Orange City Council and Heath Consulting Engineers, 25 September 2024)

'Conceptual Intersection Layout', Drawing No. 19073-INT01 (Heath Consulting Engineers, September 2023)

'Preliminary Contamination Investigation—277 Cargo Road, Orange NSW' (Envirowest Consulting Pty Ltd, 14 April 2023)

'Preliminary Flora and Fauna Assessment—Proposed Residential Subdivision, 277 Cargo Road, Orange NSW' (Envirowest Consulting Pty Ltd, 29 March 2023)

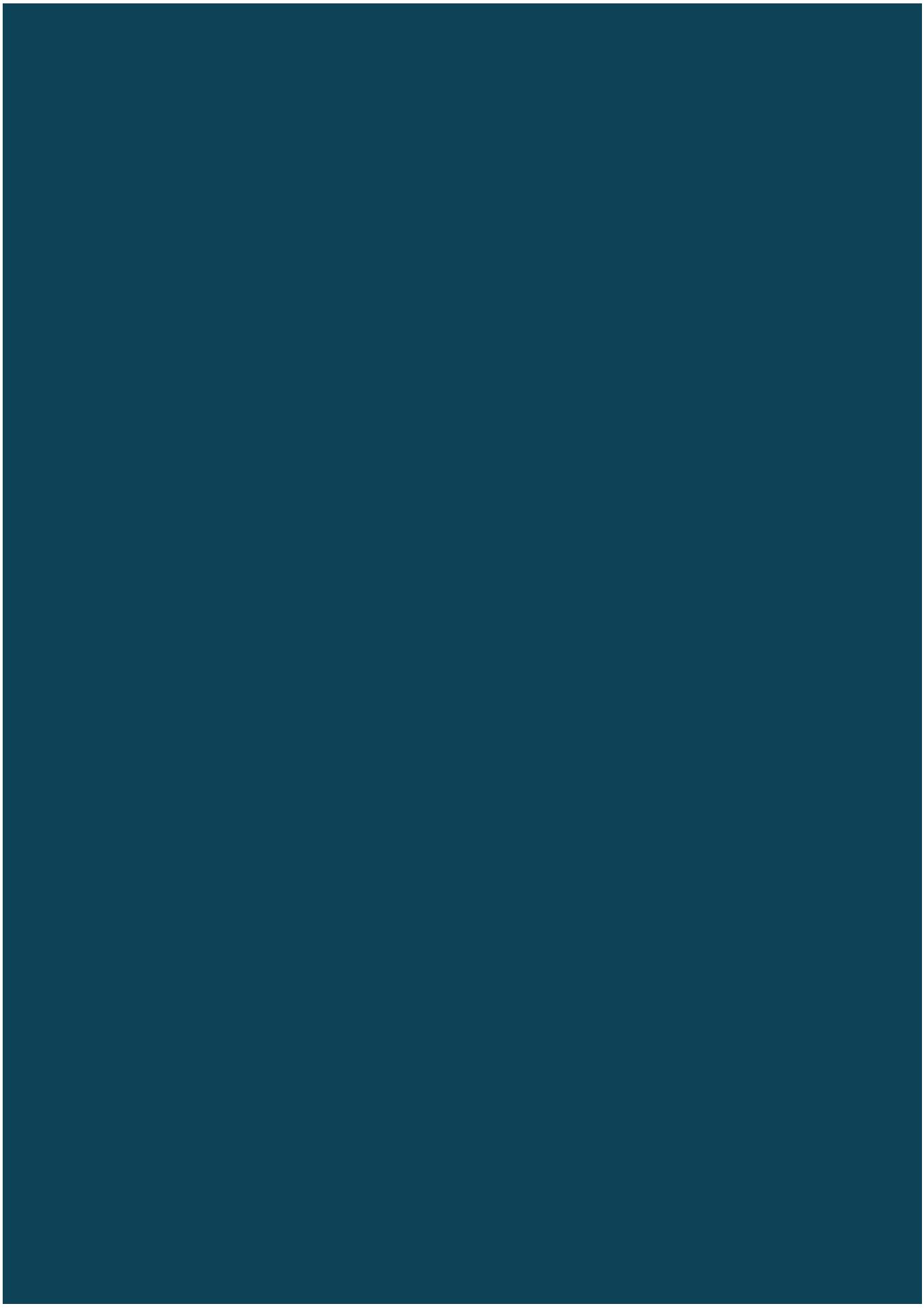
'Transport Assessment—West Orange Residential Planning Proposal' (ARC Traffic + Transport, 17 November 2023)

'Transport Assessment Addendum' (Orange City Council and ARC Traffic + Transport, 1 October 2024)

'Tree Canopy Benchmark Study & Thermal Imaging—2022 Data' (Active Green Services, 23 September 2022)

Other documents

Livable Housing Design Guidelines, 4th edition (Livable Housing Australia, 2017)



Appendix A—Urban Design Strategies for Regional NSW

Urban Design Strategy	Objectives
Strategy 1—Engage with the history and culture of places Urban environments in regional NSW are strongly defined by historic assets of European cultural heritage. However, these were preceded by places and landscapes tied to Aboriginal culture. Different histories and shared stories play out across all our regional cities, towns, and villages. Acknowledging and caring for the assets and landscapes that represent our histories and cultures supports community wellbeing, and helps to define places and contribute to their identity.	1.1 Enhance the sense of place and reinforce local identity; stronger connections to place support a sense of community and belonging. 1.2 Identify, protect, and improve awareness and respect for the unique characteristics and defining qualities of towns and urban areas; civic pride inspires people to better care for and protect their historical and cultural assets. 1.3 Respect the stories and memories of places, recognising cultural longevity and promoting its greater visibility (especially relating to Aboriginal culture and heritage). 1.4 Encourage economic activity and increase tourism by creating distinct and attractive places for businesses to trade and invest, and for people to visit. 1.5 Improve the value of the building or space and the overall place. 1.6 Provide opportunities for future generations to learn and benefit from significant buildings or spaces, their history and importance.

Urban Design Strategy	Objectives
Strategy 2—Integrate with the natural environment and landscape Connections with rural and natural landscapes are a unique aspect of daily life in many NSW regional areas. Most regional cities, towns, and villages have a strong connection with the natural environment, and with stories and experiences of Country. Careful planning and design is required to integrate urban development sustainably and appropriately.	2.1 Strengthen connection to Country, improving the health and wellbeing of people, places, and landscapes. 2.2 Provide amenity for local residents and visitors by creating interconnected networks of open space such as creek corridors and park systems – these offer expanded opportunities for walking and social activities to support people's health and wellbeing. 2.3 Mitigate climate impacts and temperature extremes by providing vegetation that can shade and cool urban areas. 2.4 Improve water and air quality by expanding green infrastructure. 2.5 Improve the quality and increase the value of the public realm; attractive and amenable streets and public spaces can enhance regional centres through good design and careful selection of landscaping and vegetation. 2.6 Support biodiversity and protect local flora and fauna by using local plant species which are particular to a regional area; using local species also creates a stronger connection with place and helps to strengthen nature-based local character and identity. 2.7 Strengthen and reinforce the environmental, economic, and social value of regional environmental elements such as bushland, rainforests, mountains, deserts, rivers, and lakes.

Appendix A

Urban Design Strategy	Objectives
Strategy 3—Revitalise main streets and town centres Main streets and town centres are the heart of many regional communities. They typically contain the biggest concentration of public and commercial facilities including places for people to gather and meet formally and informally. Main street buildings and public spaces record stories and histories, and carry a strong sense of local identity. They also host major events, parades, and festivals which celebrate the culture of an area and generate investment.	3.1 Create new or improved places for people and communities to gather, meet, and interact that are safe, enjoyable, and equitable; this makes towns more inviting, vibrant, and interesting, which attracts people to visit and live in the area. 3.2 Support new development, employment, business opportunities and prosperity by concentrating density and commercial activity. 3.3 Create a more diverse mix of uses and activities, attracting businesses and visitation through improved building and shopfront presentation designed to boost social and economic activity. 3.4 Encourage people to walk around town centres, and integrate pedestrian paths and cycling with vehicle access to create connections and networks that are safe and attractive as well as convenient and efficient. 3.5 Connect significant natural features, buildings, views, and cultural assets to make town centres more navigable, accessible, engaging and attractive, and to reinforce their local character.
Strategy 4—Prioritise connectivity, walkability and cycling opportunities For practical reasons relating to distances and population numbers, private cars are most likely to continue to be the dominant form of transport in many regional areas. However, there are opportunities to reduce car dependency near urban centres through good urban design, planning, and better public transport connections.	4.1 Facilitate increased activity and improved community health, including physical and mental health and wellbeing. 4.2 Create more walkable blocks, increasing pedestrian traffic in town centres; this improves local business exposure and reduces car dependency. 4.3 Allow development to be more sustainable, and reduce traffic congestion, car parking demand, and environmental impacts like noise and air pollution. 4.4 Make streets and spaces feel more vibrant, interesting, and safe, by having more people present, and facilitate social interaction and activity, which strengthens community cohesion. 4.5 Encourage active travel through walking and cycling to school by children and their carers.

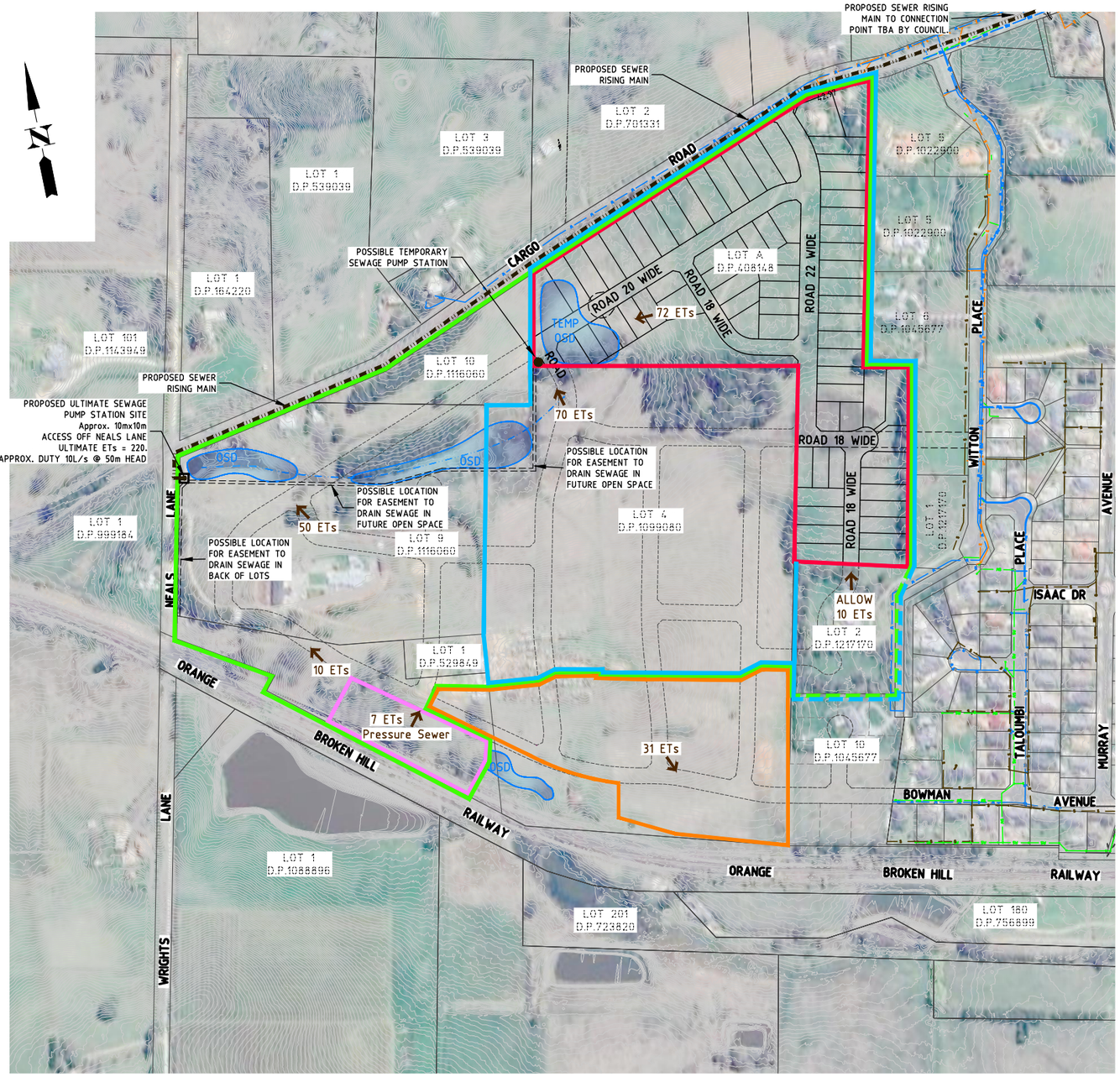
Urban Design Strategy	Objectives
Strategy 5—Balance urban growth In many regional areas there is pressure for new housing development to occur at larger scales on greenfield sites outside town centres. However, the long-term impacts of dispersed, and sometimes isolated fringe development can have high economic and social costs. Urban design and strategic planning aim to achieve a sustainable balance between the consolidation and distribution of new development.	5.1 Manage development so that its density is appropriate across different urban settings, and respects local contexts and the sensitivity of heritage areas, environmental areas, and other influencing factors. 5.2 Find opportunities to provide new dwellings within a city or town centre which do not compromise local values relating to heritage and place. 5.3 Reduce car dependence and increase urban mobility through people living closer to town centres and in more walkable and sociable neighbourhoods. 5.4 Boost activity in main streets and town centres, through urban consolidation and increased local population living in close proximity. 5.5 Protect agricultural land around cities and towns—including for local food production. 5.6 Protect biodiversity and mitigate natural hazards by keeping urban development to a compact form and area rather than dispersed across the rural landscape. 5.7 Increase housing choice through offering mixed development types in both existing neighbourhoods and greenfield settings, and focus development on people's housing needs. 5.8 Retain and increase opportunities for the local production of fresh food.

Appendix A

Urban Design Strategy	Objectives
Strategy 6—Increase options for diverse and healthy living Regional populations are changing, and we need to respond by rethinking housing forms and densities, and providing new options. In particular, in many regional areas, design and planning needs to allow for the needs of older people. Proximity to essential services and a well-designed public realm make places attractive to live for both young and old.	6.1 Create built environments which are more diverse, varied, and vibrant. 6.2 Attract new residents through increasing housing choices and types, which can respond to varying needs and reinforce community stability. 6.3 Retain local populations and allow households to evolve and adapt over time in the same town, for example young people moving from the family home to a smaller home, and older people downsizing in their neighbourhood. 6.4 Support the sustained health of Country, the environment, the economy, people, and communities. 6.5 Create built environments which allow people of all abilities and ages to have access to healthy lifestyles that support mental health.
Strategy 7—Respond to climate conditions and their impacts Varied climate zones, landscapes, and topographies across NSW generate weather and temperature conditions that affect different regional urban settlements in different ways. Compared to long-term records the climate is changing—weather patterns are becoming less predictable, temperatures more extreme, sea levels are rising, and natural hazards such as bush fires, drought, and flooding are becoming more intense and more frequent.	7.1 Improve the amenity, health, and safety of the public realm, in day-to-day and extreme conditions. 7.2 Respond to and celebrate an area's predominant climate, for example a semi-tropical climate, or hot arid climate. 7.3 Mitigate risk and protect against natural hazards, such as bush fires, flooding, and extreme weather, to create safer, resilient towns and stable property values. 7.4 Reduce a development's environmental footprint, reducing carbon emissions through more compact and resource-efficient urban development. 7.5 Reduce energy costs by integrating passive environmental design features. 7.6 Mitigate and anticipate the particular impacts of climate change such as sea level rise, urban heat-island effect, prolonged drought, and increases in extreme weather events.

Source: *Urban Design for Regional NSW: A Guide for Creating Healthy Built Environments in Regional NSW*

ORANGE CITY COUNCIL



CONCEPTUAL SEWER SERVICING STRATEGY:

- The Witton Place Candidate Area consists of 5 different land titles with 3 individual land holders.
- The majority of the Witton Place Candidate Area can be serviced by a new sewage pump station located at the natural low point at Neals Lane.
- The south eastern portion of the Witton Place Candidate Area (approx. 31 lots) can be serviced by gravity sewer reticualtion via an extension of existing sewer mains south of Bowman Avenue. Council will need to ensure that any sewer main design for the development of Lot 10 D.P.1045677 is extended through to the western boundary at sufficient depth. In addition, Council would need to confirm that there is spare capacity in the downstream sewer infrastructure for the additional 31 ETs.
- A small section of the Witton Place Candidate Area (approx. 7 lots) adjacent to the Orange - Broken Hill Railway would be best serviced by a pressure sewer system to eliminate the need for a very small sewage pump station and the ongoing oepration and maintenance costs associated with a Council owned sewage pump station.
- Lot A D.P.408147 277 Cargo Road (72 Lots) could be serviced via a temporary sewage pump station. This pump station has potential to service an additional 70 lots from possible future rezoning of Lot 4 D.P.1099080.
- If a single sewage pump station is constructed at Neals Lane to service the Witton Place Candidate Area then appropriate easements and access arranagements would need to be negotiated by Council at that time to ensure development of the Witton Place Candidate Area can occur. Possible locations of these easements is shown but would be subject to detail survey and design.

LEGEND

- SUBJECT LAND
- EXISTING WATERCOURSE
- EXISTING GRAVITY SEWER MAIN
- NATURAL SURFACE CONTOURS (INTERVAL 2m AHD)
- ULTIMATE SEWER PUMP STATION CATCHMENT = 220 ETs
- TEMPORARY SEWER PUMP STATION CATCHMENT = 72 or 152 ETs
- SERVICED BY GRAVITY SEWER = 31 ETs
- SERVICED BY PRESSURE SEWER = 7 ETs
- PROPOSED SEWER RISING MAIN

THIS PLAN IS PROVIDED FOR INTERNAL USE ONLY AND IS PROVIDED TO ASSIST THE PLANNING PROPOSAL SUBMITTED FOR 277 CARGO ROAD, ORANGE. THE PLAN MUST BE TREATED AS COMMERCIAL IN CONFIDENCE.

DIMENSIONS AND AREAS ARE SUBJECT TO SURVEY.

SERVICES AND EASEMENTS OTHER THAN THOSE SHOWN MAY AFFECT THE LAND. THESE MUST BE OBTAINED FROM DETAILED SITE SURVEY AND SURVEY SEARCH.

19073-SEWER SERVICING (13/12/23)

HEATH CONSULTING ENGINEERS

25 0 25 50 75 100 125m
SCALE 1:5000 (A3)

PROPOSED DEVELOPMENT LOT A DP408148, 277 CARGO RD, ORANGE
CONCEPT SEWER SERVICING STRATEGY

D24/106562

ORANGE CITY COUNCIL

ADDENDUM	**Water and Sewer Strategy**
FROM	**Water and Sewer Engineer, Technical Services, Orange City Council**
DATE	**25 September 2024**
ON	**277 Cargo Road – Gateway Alteration**

Executive Summary

Council considered a Planning Proposal to amend the Orange Local Environmental Plan 2011 in relation to land at 277 Cargo Road (Lot A DP 408148) on 5 September 2023 to the Planning and Development Committee. The subject land, forms part of the Witton Place Candidate Area identified under the Orange Local Environmental Plan 2011 which foreshadows the site being rezoned for residential development.

Council staff in consultation with the proponent have since proceeded to amend the concept plan submitted with the original proposal to consider a site-specific Structure Plan for the whole of the Witton Place Candidate Area. To enable the changes envisaged through the Structure Plan Council staff are seeking a Gateway Alteration from the Department of Planning, Housing, and Infrastructure so that the proposal can be placed on exhibition in accordance with the amended proposal. The amended Planning Proposal seeks to:

- Rezone part RU1 Primary Production and C3 Environmental Management to R1 General Residential and R2 Low Density Residential, RE1 Public Recreation in accordance with the Structure Plan for the Witton Place Candidate Area.
- Amend the Minimum Lot Size from 100 hectares to 1500 square meters corresponding with the R2 Low Density Residential zone and remove the Minimum Lot Size from the remainder of the site.
- Add the Urban Release Area overlay to the site to ensure a Development Control Plan is prepared before any Development Applications can be made on the subject land, and for the purpose of streamlining the assessment of Bush Fire Prone Land, consistent with the previous proposal considered by Council.
- Remove the mapped area from the biodiversity sensitivity mapping, consistent with the previous proposal considered by Council.
- Add a buffer area to the site to exempt sensitive locations from Complying Development.

The yield estimate for the site subject to the Planning Proposal has increased from approximately 72 lots to approximately 102 lots, representing an overall yield increase of 30 lots.

Water and Sewer Servicing

Water

The development area is currently serviced from the Ploughmans Valley Potable Water Booster Station. Preliminary modelling suggests that an extension of the exiting DN150 main at Whitton Place will be sufficient to service Stage 1 (102 ETs). It is assumed that the highest elevation of the development land for Stage 1 will not exceed 909m RL.

Sewer Reticulation

- The development site is currently outside of existing gravity network catchments. The current servicing plan (developed by the proponent) proposes a temporary sewer pump

station for the subject site. The ultimate sewer pump station is to be constructed near Neals Lane when the broader Candidate Area proceeds.

This servicing strategy is acceptable for Council purposes, subject to further review of the temporary sewer pump station discharge location which requires a detailed investigation at the Development Assessment Stage.

Summary

Council staff support the amended Planning Proposal for 277 Cargo Road (Lot A DP 408148) and noting the minimal increase in yield, there is no additional Water and Sewer Servicing requirements needed to support the amended proposal.

Consultant Review

_____ has reviewed the above addendum to the Concept Sewer Servicing Strategy (December 2023) and is supportive of the recommendations.

Sign: _____

Date: 10/10/24

Bushfire strategic study
277 Cargo Road, Orange NSW

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Rev	**Report number**	**Date**	**Prepared by**	**Checked by**	**Revision details/status**
0	R44810bf	30/05/2024	Leah Desborough CEnvP Senior Environmental Scientist	Tiffany Skinner BNatRes (Hons) Environmental Scientist	

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1. Introduction

A planning proposal will be submitted to Orange City Council for a proposed urban residential zoning and lot size at 277 Cargo Road, Orange NSW. The site has an area of approximately 11 hectares. The site forms part of the Witton Place Candidate Area comprising the land bounded by Cargo Road, Broken Hill Railway Line, Neals Lane and west of the existing urban area along Witton Place. The Witton Place Candidate Area is approximately 43 hectares in size. The site is not mapped as bushfire prone land.

Orange City Council have requested a Strategic Bushfire study as part of the planning proposal.

2. Objectives

The objective of the investigation was to conduct a Strategic Bushfire Study to assess if the proposal is appropriate in the bushfire hazard context.

3. Scope of work

Barnson Pty Ltd was commissioned by Landorange Partnership Pty Ltd to prepare a Strategic Bushfire Study in accordance with NSW RFS (2019) *Planning for Bushfire Protection* at 277 Cargo Road, Orange NSW and the Witton Place Candidate Area. The scope was to assess the bushfire landscape, land-use, access and egress, emergency services, infrastructure and adjoining land.

4. Site

The assessment area is 277 Cargo Road, NSW which forms part of the Witton Place Candidate Area (Figure 1). The Witton Place Candidate Area comprises 5 lots with a total area of 43 hectares.

Lot/DP	Address
Lot A DP408148	277 Cargo Road, Orange
Lot 10 DP1116060	349 Cargo Road, Orange
Lot 9 DP1116060	349 Cargo Road, Orange
Lot 4 DP1099080	4 Neals Lane, Orange
Lot 1 DP529849	4 Neals Lane, Orange

5. Method

The bushfire strategic study was undertaken as a desktop assessment using available aerial photography.

The NSW Rural Fire Service (2015) *Guide for Bush Fire Prone Land Mapping Version 5b* identifies the introduction of Category 3 vegetation and the requirement for Council to incorporate Category 3 vegetation into Council's bush fire prone land maps. Category 3 vegetation is defined as a medium bush fire risk. It is higher than Category 2 vegetation but lower than Category 1. It is represented as dark orange on a Bush Fire Prone Land map and has a 30m buffer distance. Category 3 vegetation includes grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands.

Aerial photograph review was undertaken to determine the presence of Category 3 vegetation on and around the Witton Place Candidate Area for a distance of 100m. Google Earth aerial photography dated October 2023 was adopted to assess the presence of Category 3 vegetation.

Indicative APZ were determined by review of Google Earth elevation profiles and aerial photographs. The most conservative slope and vegetation type to a distance of 140m were used to determine the minimum indicative APZ in accordance with Table A1.12.3 in NSW RFS (2019) *Planning for Bush fire Protection*. The site is located in the Central Ranges and has a FFDI of 80.

6. Bushfire strategic study

6.1 Bushfire landscape assessment

6.1.1 Surrounding vegetation, topography and weather

Land-use within the candidate area is predominantly grazing land. Several dwellings with maintained yards and associated infrastructure occur in the north eastern section, western section and central southern section.

Stands of pine trees exist in the central and western sections of the site. Remnant eucalypts occur along the southern boundary. The existing bush fire prone area mapping does not map the areas of pine trees and remnant eucalypts as Category 1 or Category 2 vegetation (Figure 2).

Grazing land is classified as Category 3 vegetation.

Land-use to the north comprises Cargo Road and grazing with several areas containing residential dwellings. Cargo Road is considered maintained land. Land to the north is classified as Category 3 vegetation.

Land-use to the east is large lot residential with maintained yards. Land to the east is not classified as bush fire prone land.

Land-use to the south includes a rail corridor, several dams, residence and grazing land. The rail corridor, dams and residence are not classified as bush fire prone land. The grazing land is classified as Category 3 vegetation.

Land-use to the west includes Neals Lane, residences and grazing land. Cabonne Council have mapped areas west of Neals Lane as Category 3 land (Figure 3).

Figure 3 describes the vegetation categories for the site and within 100m of the site.

The site is located on an upper slope with gently inclined slopes of less than 5˚ occurring in all directions.

The average annual rainfall is 890mm and monthly rainfall varies between 47 and 95mm. The lowest rainfall occurs in autumn. Winter rainfall is most reliable often characterized by a large number of rainy days of low rainfall. Summer rainfall is less reliable and often characterized by storms of high intensity.

Summers are warm to hot with maximum temperatures averaging 26˚C and winters are cool to cold with maximum temperatures averaging 11˚C (Appendix 1).

The bushfire risk period is between October and March with minimal bushfire risk over winter. Summer winds are predominantly from the east or south east which is the existing urban interface.

6.1.2 Potential fire behaviour and fire runs

Bushfires will move quickly upslope through the existing grassland areas to the north, south and west.

6.1.3 Bushfire history
There is no recent history within the Witton Place Candidate Area or within 5km.

6.1.4 Bushfire access
The site is accessed from Cargo Road to the north and Neals Lane to the west. Future plans indicate access to the candidate area will also occur to the east from Bowman Avenue. Future development plans will be designed to ensure suitable emergency services access.

6.2 Land-use assessment
6.2.1 Development risk profile
The highest point within the development occurs in the central section of the development and expected to be surrounded by maintained parkland and residential lots. Residential lots will occur along boundaries which are buffered by public road reserves and rail corridor.

6.2.2 Development land-use
Subdivision plans have not been finalised but expected to include residential lots with open space areas including parkland and detention basins. The final subdivision plan will comply with NSW RFS (2019) *Planning for Bushfire Protection*. Lots will generally increase in size from east to west and towards Cargo Rd and the rail line for buffers for noise/vibration. The larger lots have potential for increased managed buffers. Most of the proposed open space for the Witton Place Candidate Area will have perimeter roads adjacent to part of these spaces.

The development is less likely to support special fire protection purposes such as aged care or schools due to distance from services.

6.2.3 Siting of land-uses and impacts on APZ
6.2.3.1 277 Cargo Road
Bush fire hazards were identified on the northern, western and southern sides of the development. Maintained residential land is present to the east of the site and are considered managed land and not a bush fire hazard.

Each side of the development was assigned a number for ease of identification. Figure 4 depicts the numbering identification for each side.

Table 1 describes the side, vegetation and slope within 140m of the development.

APZ are required on Sides 1, 2, 3 and 4 of the development. Table 2 and Figure 5 describes the minimum required APZ as per Table A1.12.3 in NSW RFS (2019) *Planning for Bush fire Protection*.

The pine tree stand which influences the APZ on Sides 3 and 4 will be managed as parkland following development of the Witton Place Candidate Area and may include removal of some trees to enable management in accordance with NSW RFS asset protection zones. Development of the Witton Place Candidate Area will mean that APZ on Sides 2, 3 and 4 will not be required as the vegetation formation will be classified as managed land in the form of residential lots or managed parklands.

Table 1. Vegetation and slope to 140m around the site

Side	Distance (m)	Vegetation/Land-use	Vegetation formation	Bushfire hazard	Effective slope
1	0 to 30	Cargo Road	Managed land	No	>0˚ to 5˚
	30 to 140	Grazing	Grassland	Yes	>0˚ to 5˚
2	0 to 90	Grazing	Grassland	Yes	0˚
	90 to 120	Cargo Road	Managed land	No	0˚
	120 to 140	Residential	Managed land	No	0˚
3	0 to 85	Pine tree stand	Pine plantation	Yes	0˚
	90 to 140	Grazing	Grassland	Yes	>0˚ to 5˚
4	0 to 140	Pine tree stand	Pine plantation	Yes	0˚
	140 to 140	Pine tree stand	Pine plantation	Yes	>0˚ to 5˚
5	0 to 70	Residential	Managed land	No	>0˚ to 5˚
	70 to 140	Residential	Managed land	No	0˚
6	0 to 80	Residential	Managed land	No	0˚
	80 to 140	Residential	Managed land	No	>0˚ to 5˚

Table 2. Asset protection zones

Side	Minimum APZ (m)	Availability
1	11	Yes, Cargo Road
2	10	Yes
3	25	Yes
4	25	Yes
5	Not applicable	Not applicable
6	Not applicable	Not applicable

6.2.3.2 Witton Place Candidate area

Bush fire hazards were identified on the northern, western and southern sides of the development. Maintained residential land is present to the east of the site and are considered managed land and not a bush fire hazard.

Each side of the development was assigned a number for ease of identification. Figure 6 depicts the numbering identification for each side.

Table 3 describes the side, vegetation and slope within 140m of the development.

APZ are required on Sides 1, 2, 3 and 4 of the development. Table 4 and Figure 7 describes the minimum required APZ as per Table A1.12.3 in NSW RFS (2019) *Planning for Bush fire Protection*.

Neals Lane provides the minimum required APZ on Side 2 of the development.

The APZ on Side 4 will be located on the site. Development of the approved subdivision at the end of Bowman Avenue will mean that APZ on Side 4 will not be required as the vegetation formation will be classified as managed land in the form of residential lots.

Pine tree stands and remnant vegetation on the site will be managed as parkland following development of the Witton Place Candidate Area. The presence of the parklands is not expected to impact on the bushfire risk to the Candidate Area.

Table 3. Vegetation and slope to 140m around the site

Side	Distance (m)	Vegetation/Land-use	Vegetation formation	Bushfire hazard	Effective slope
1	0 to 30	Cargo Road	Managed land	No	>0˚ to 5˚
	30 to 140	Grazing	Grassland	Yes	>0˚ to 5˚
2	0 to 15	Neals Lane	Managed land	No	0˚
	15 to 130	Grazing	Grassland	Yes	0˚
	130 to 140	Grazing	Grassland	Yes	>0˚ to 5˚
3	0 to 40	Rail corridor	Managed land	No	>0˚ to 5˚
	40 to 140	Grazing	Grassland	Yes	>0˚ to 5˚
4	0 to 105	Grazing	Grassland	Yes	>0˚ to 5˚
	105 to 140	Residential	Managed land	No	>0˚ to 5˚
5	0 to 80	Residential	Managed land	No	0˚
	80 to 140	Residential	Managed land	No	>0˚ to 5˚

Table 4. Asset protection zones

Side	Minimum APZ (m)	Availability
1	11	Yes, Cargo Road
2	11	Yes, Neals Lane
3	11	Rail corridor
4	11	Yes
5	Not applicable	Not applicable

6.3 Access and egress

6.3.1 Capacity of road network

The subdivision plan has not been finalised. The capacity of the road network is expected to comply with LEP requirements and NSW RFS (2019) *Planning for Bushfire Protection*.

6.3.2 Key access routes

The Witton Place Candidate Area is situated on the western fringes of the Orange urban area. Key access routes are expected to be to the east towards Orange.

6.3.3 Potential isolation

The Witton Place Candidate Area proposes to have road connections to Cargo Road and Bowman Avenue at a minimum. These connections are to the north and east away from potential bushfire interface and will provide alternative access/egress points in an emergency that have sufficient capacity for each stage of development.

The 277 Cargo Road site has one access onto Cargo Road until the Witton Place Candidate Area is developed. The furtherest lot is approximately 500m from the road connection. The future subdivision design will include internal roads that moves people towards the key access/egress points and not through higher risk bush fire lands.

6.4 Emergency services

The growth of urban areas is likely to increase the potential demand for emergency services. The existing urban interface is currently with bushfire prone land. The proposal will result in the interface moving to the west in stages.

The final subdivision plan will be in accordance with LEP requirements and NSW RFS (2019) *Planning for Bushfire Protection* which reduces the potential risk to emergency services in bushfire events.

Perimeter roads or rail corridors will provide part or all of the required APZ on completion of the Witton Place Candidate Area thereby decreasing the bush fire risk for the entire urban area. The Witton Place Candidate Area is expected to largely be used for detached low density residential housing on the perimeter of the urban area.

The development is less likely to support special fire protection purposes such as aged care or schools due to distance from services. There is a low probability these higher risk land-uses increasing demand for emergency services.

6.5 Infrastructure

6.5.1 Water supply

The site will be serviced by the town reticulated water supply. The design of the reticulated water supply network has not been finalised. The design is expected to comply with LEP requirements and NSW RFS (2019) *Planning for Bushfire Protection*.

6.5.2 Life safety issues

The site will be serviced by underground piped gas and electricity. The design of the services network has not been finalised. The design is expected to comply with LEP requirements and NSW RFS (2019) *Planning for Bushfire Protection*.

6.6 Adjoining land

The Candidate Area is bounded by Cargo Road, Neals Lane, rail corridor and existing residential lots. Cargo Road, Neals Lane and the rail corridor will provide APZ to the development which will be further enhanced by the expected setbacks required due to noise and vibration buffer requirements. All bushfire management measures on the Witton Place Candidate Area will be managed within the site or adjoining managed land.

7. Report limitations and intellectual property

This report has been prepared for the use of the client to achieve the objectives given the clients requirements. The Australian Standard 3959, *Construction of buildings in bushfire prone areas*, and the NSW Rural Fire Service, *Planning for bushfire protection* (2019) have been used as guidelines in this report. Where limitations or uncertainties are known, they are identified in the report. No liability can be accepted for failure to identify conditions or issues which arise in the future and which could not reasonably have been predicted using the scope of the investigation and the information obtained.

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8. References

Google Earth Pro (2024) *277 Cargo Road, Orange NSW (2023 historical image)* (https://earth.google.com/web/search/277+Cargo+Road,+Orange/@-33.2855478,149.0582594,910.0718095a,713.12267904d,35y,0h,0t,0r/data=CoABGlYSUAokMHg2YjEwMmRhODQ1ZWU4NTQ5OjB4ZGZkOWYwNWZhZGJjMDZkGe04j9SMpEDAIeg10ULdoWJAKhYyNzcgQ2FyZ28gUm9hZCwgT3JhbmdlGAIgASImCiQJ2cXAtsx7REAR2cXAtsx7RMAZzUWrgxMdRkAhtZoppS_SUcA) (accessed 27/5/2024)

NSW RFS (2015) *Guide for Bush Fire Prone Land Mapping, Version 5b*

NSW RFS (2019) *Planning for Bushfire Protection* (Planning & Environment Services: Sydney NSW)

Figures

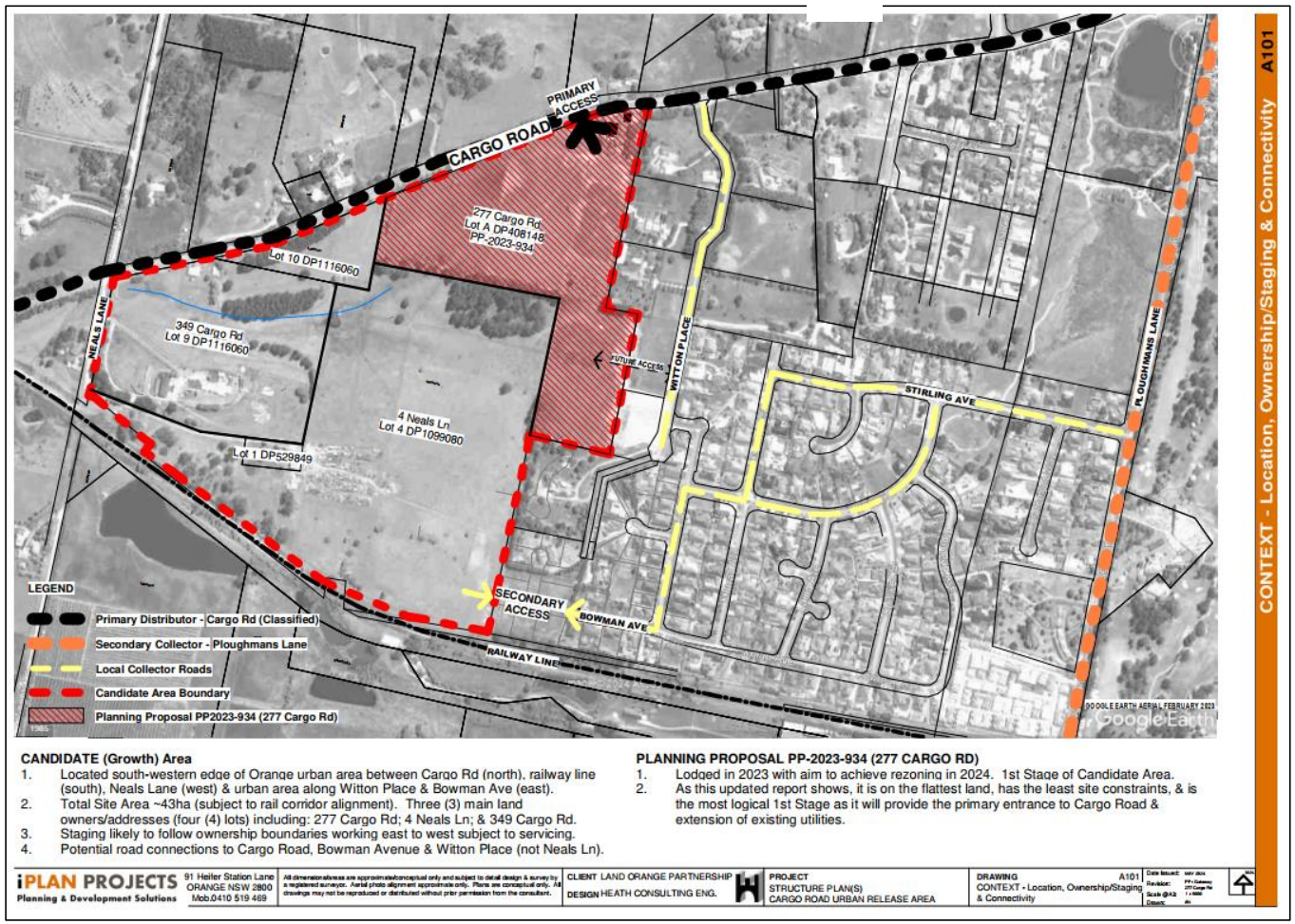
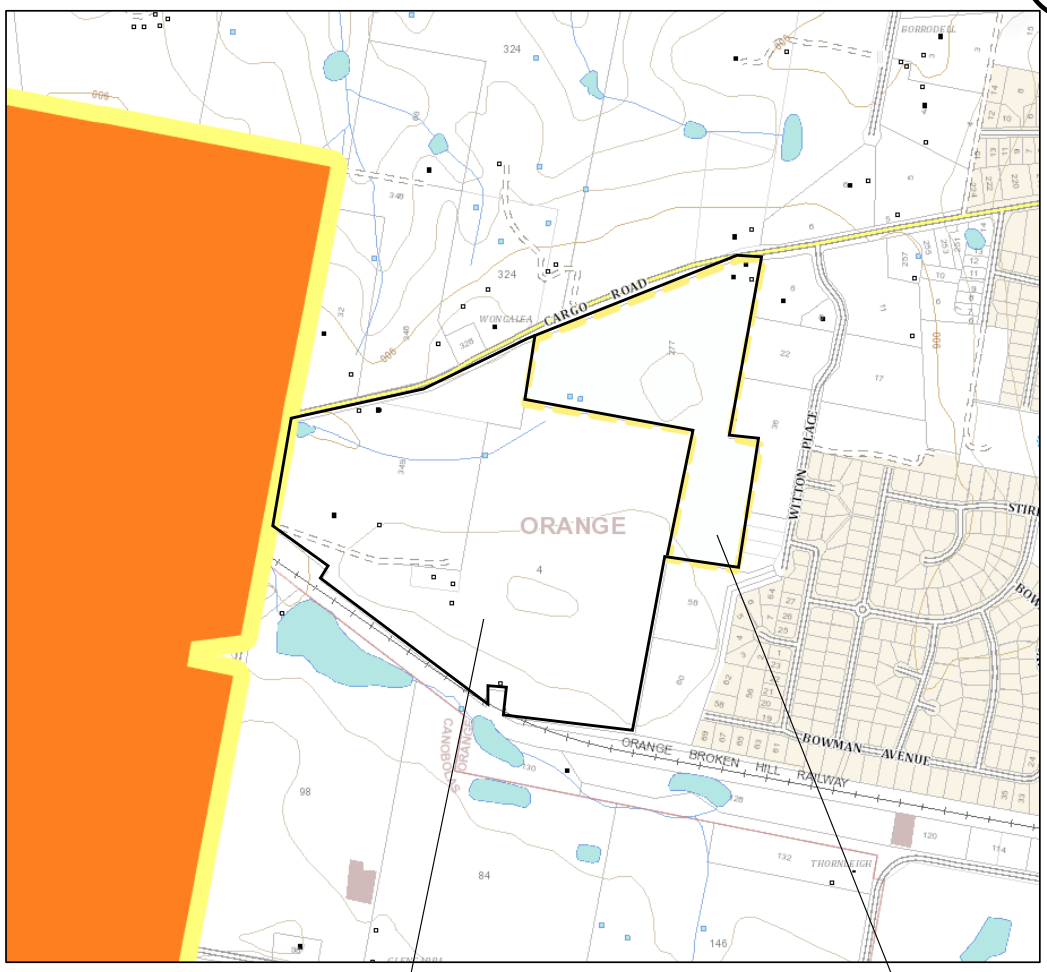


Figure 1. Locality map

277 Cargo Road, Orange NSW

Barnson Pty Ltd

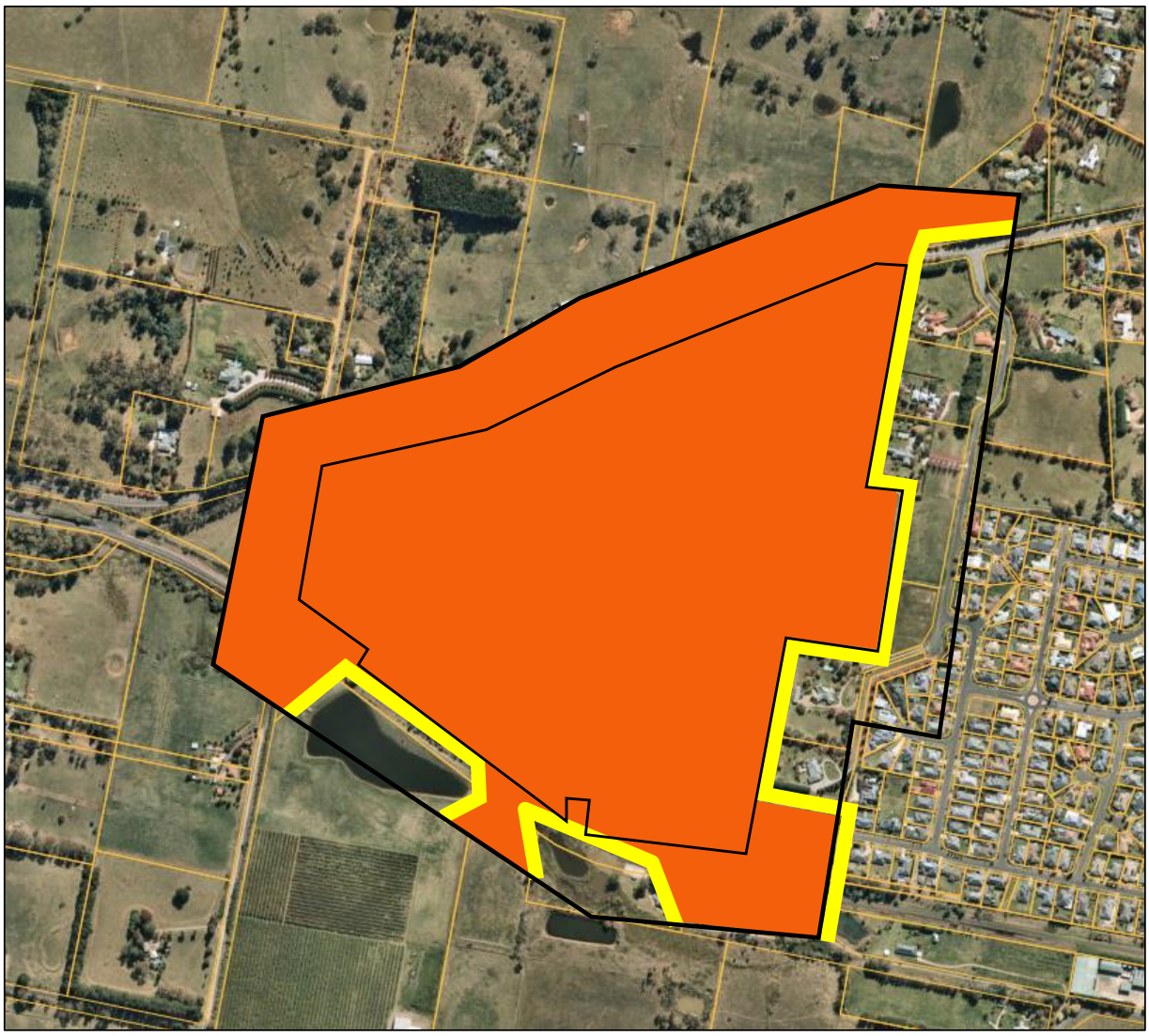
Job: R44810bf	Drawn by: Heath Consulting Eng	Date: 25/5/2024



Legend

- Lot boundary
- Category 3 vegetation
- 30m buffer

Figure 2. Existing bushfire mapping		
277 Cargo Road, Orange NSW		
	Barnson Pty Ltd	
Job: R44810bf	Drawn by: -	Date: 29/5/2024



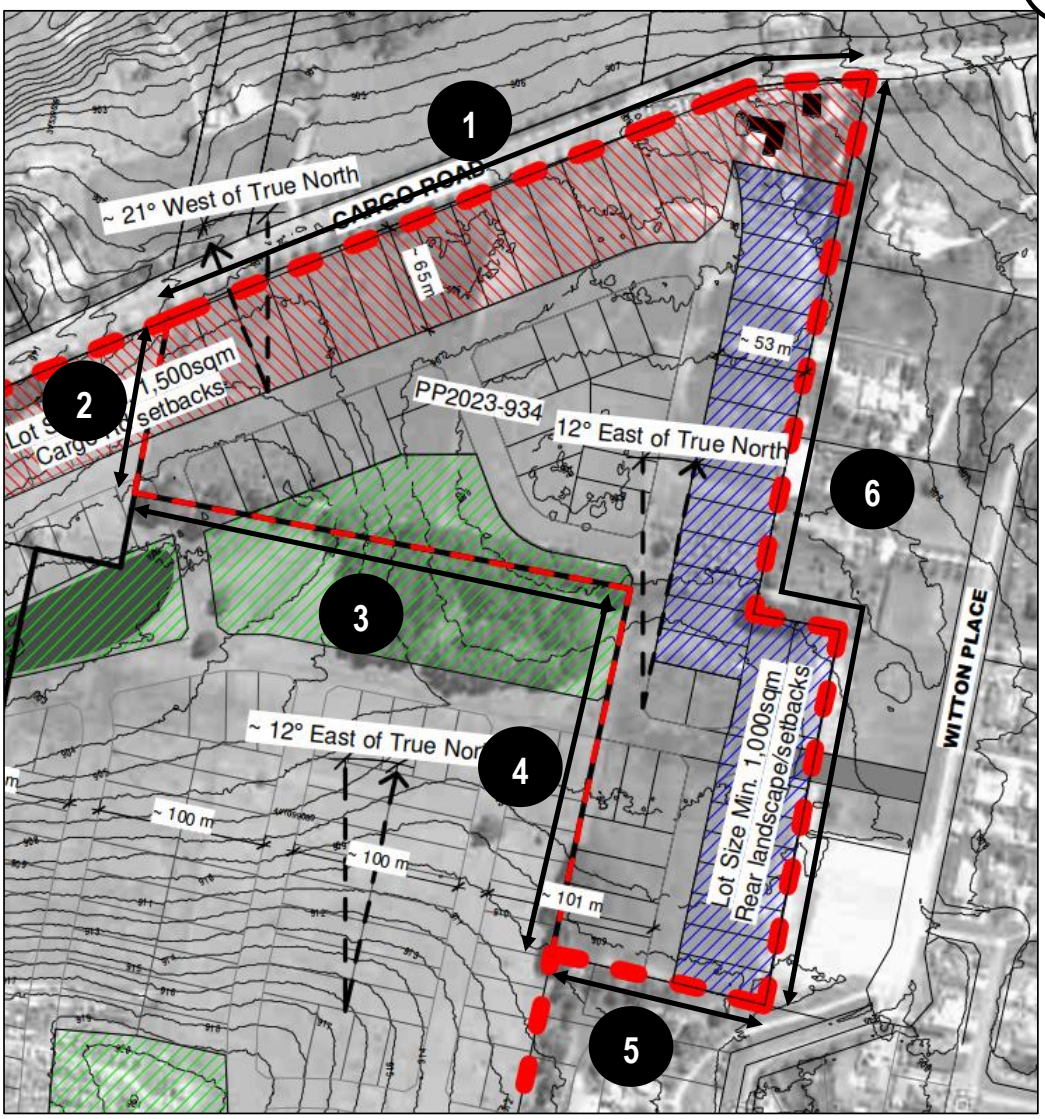
Approximate Scale 1: 8,600

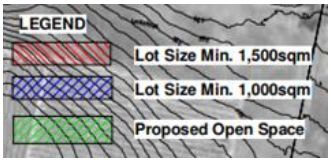
0 86 172 3444

Legend

- Lot boundary
- 100m investigation area
- Category 3 vegetation
- 30m buffer

Figure 3. Vegetation categories		
277 Cargo Road, Orange NSW		
	Barnson Pty Ltd	
Job: R44810bf	Drawn by: LD	Date: 25/5/2024

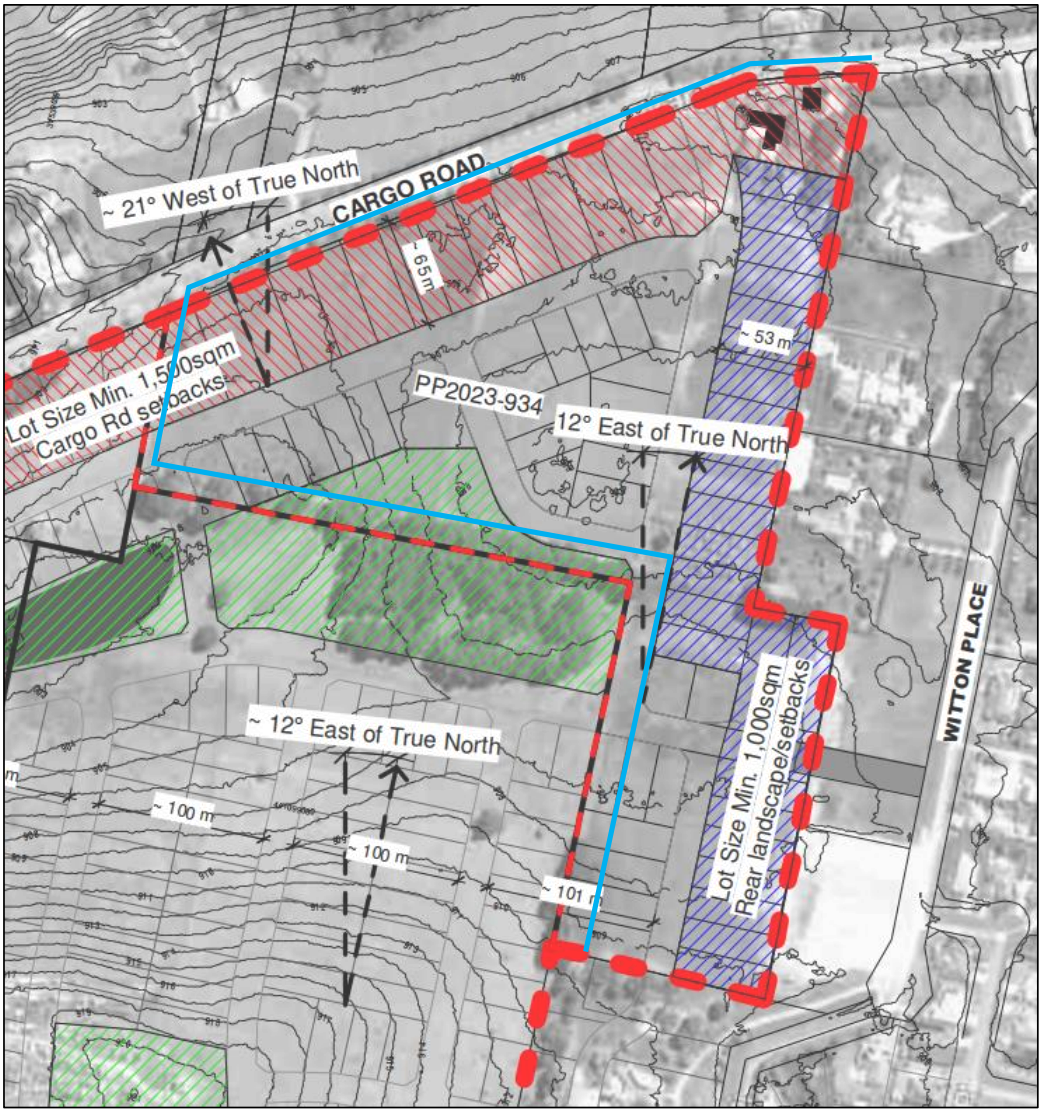




Approximate Scale 1: 3,900

0 39 78 156

Figure 4. Identification of sides – 277 Cargo Road		
277 Cargo Road, Orange NSW		
	Barnson Pty Ltd	
Job: R44810bf	Drawn by: LD	Date: 25/5/2024



Approximate Scale 1: 3,900

0 39 78 156

Legend

Minimum APZ

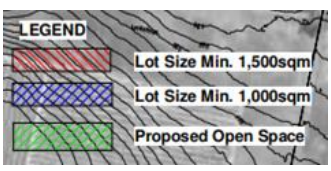
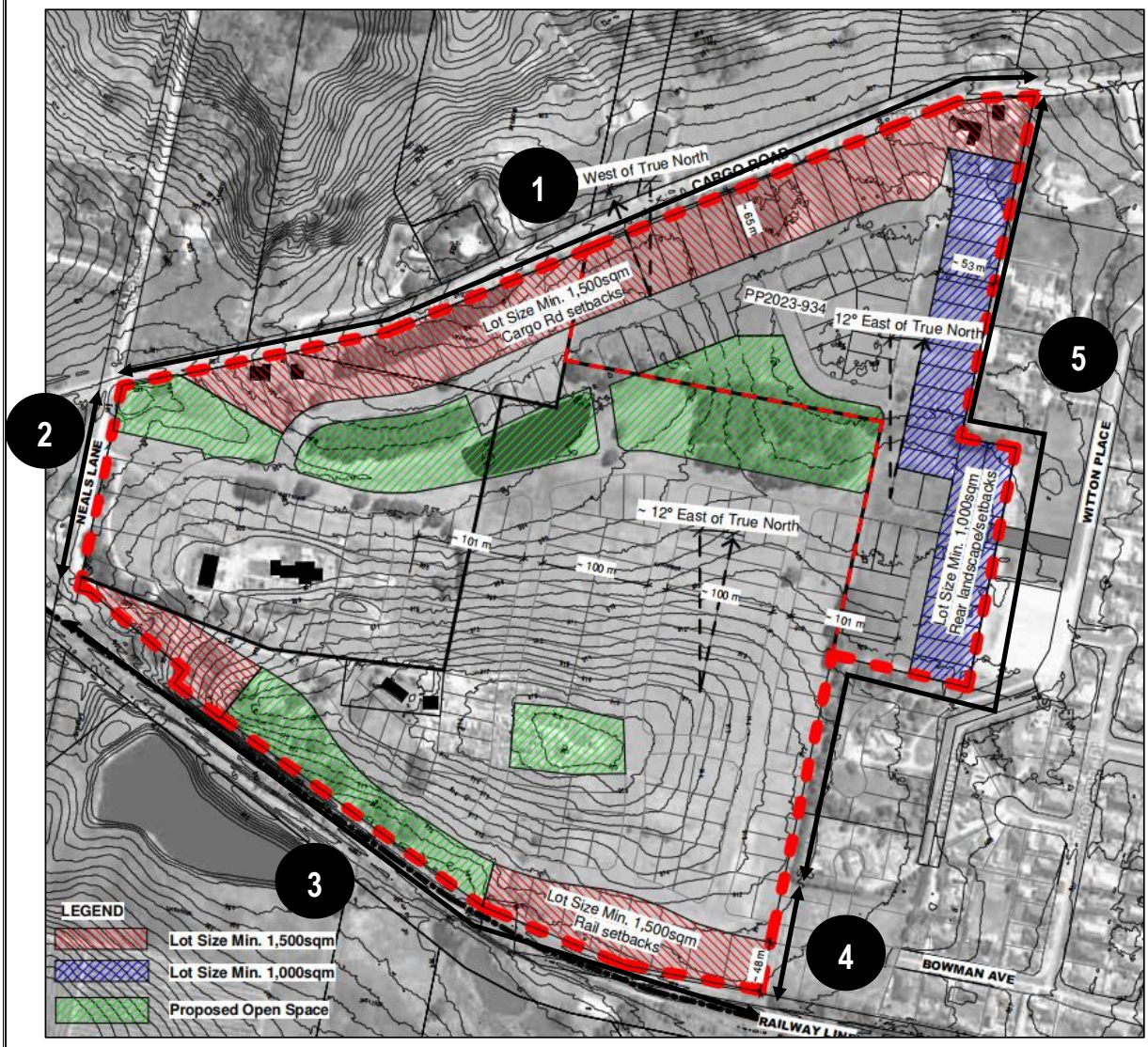


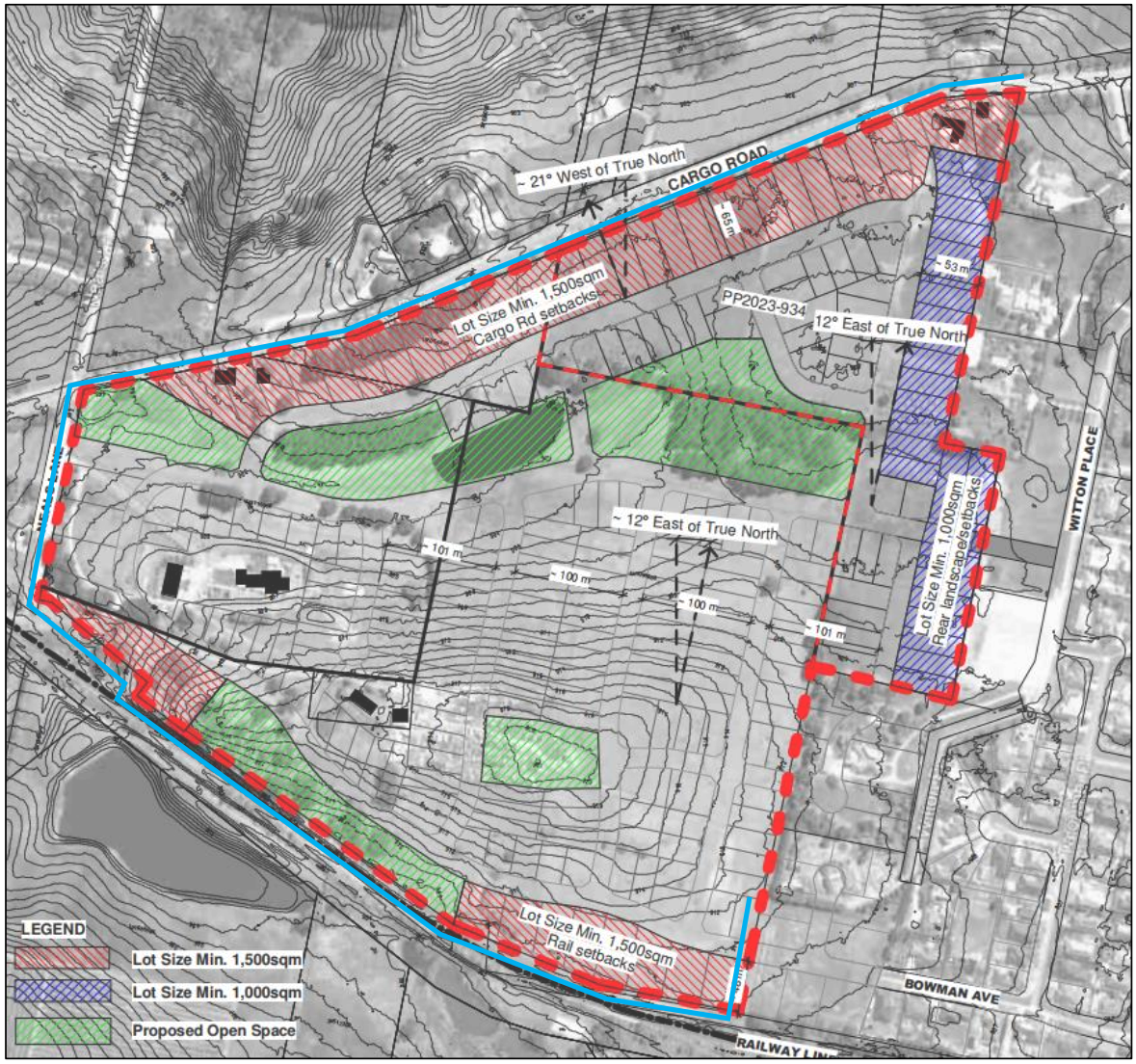
Figure 5. Asset protection zones – 277 Cargo Road		
277 Cargo Road, Orange NSW		
	Barnson Pty Ltd	
Job: R44810bf	Drawn by: LD	Date: 25/5/2024



Approximate Scale 1: 5,800

0 58 116 232

Figure 6. Identification of sides – Witton Place Candidate Area		
277 Cargo Road, Orange NSW		
	Barnson Pty Ltd	
Job: R44810bf	Drawn by: LD	Date: 25/5/2024



Legend

Minimum APZ

Approximate Scale 1: 5,800

0 58 116 232

Figure 7. Asset protection zones – Witton Place Candidate Area

277 Cargo Road, Orange NSW

Barnson Pty Ltd

Job: R44810bf	Drawn by: LD	Date: 25/5/2024



Transport Assessment

West Orange Residential Planning Proposal

for

Landorange Partnership

Document Control

Project No: 0380

Project: West Orange Residential Planning Proposal

Client: Landorange Partnership

File Reference: P0380r1v5 West Orange Residential Planning Proposal Transport Assessment

Revision History

Revision	Date	Details	Approved by
v1	17/03/2023	Draft 1	A. Reisch
v2	17/04/2023	Final 1	A. Reisch
v3	14/11/2023	Final 2	A. Reisch
v4	15/11/2023	Final 3	A. Reisch
v5	17/11/2023	Final 4	A. Reisch

This document has been prepared by arc traffic + traffic for the use of the stated Client only, and addresses the project specifically detailed in this document, and as such should not be considered in regard to any other project. This document has been prepared based on the Client's description of its requirements, information provided by the Client and other third parties. arc traffic + transport does not accept any responsibility for the use of or reference to this document other than intended by the stated Client.

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Appendix A: Traffic Surveys

Appendix B: SIDRA Movement Reports

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1 Introduction

1.1 Overview

arc traffic + transport has been engaged by Landorange Partnership to prepare a Transport Assessment (**TA**) relating to a proposed residential subdivision (the **Proposal**) on land at 277 Cargo Road, Orange (the **Site**). The Proposal provides:

- Approximately 72 low density residential lots;
- New internal road and pedestrian infrastructure; and
- A new access intersection to Cargo Road, and connections to existing local roads to the east of the Site.

Full details of the Proposal are provided in the broader **Planning Proposal** documentation to be submitted to City of Orange Council (**Council**) and in turn the NSW Department of Planning & Environment (**DP&E**) to be assessed through the Gateway process.

It is noted from the outset that the Site sits within a broader parcel of land that is referred to as the Witton Place Candidate Area (**WPCA**) in the Orange Local Housing Strategy 2022 (the **Housing Strategy**). The WPCA is also anticipated to be rezoned (further to appropriate assessment and approvals) for low density residential lots; it is estimated that an additional 105 lots could be provided in the WPCA, for a total of approximately 177 lots.

While the TA focuses on the Site itself, the development of the broader WPCA has necessarily been considered, particularly in regard to future trip generation and the operation of key intersections to Cargo Road.

1.2 Transport for NSW and Council Requests for Additional Information

arc traffic + transport prepared an earlier version of the TA dated 17/04/2023 which was submitted with the Planning Proposal to Council, who in turn referred it to Transport for NSW (**TfNSW**) for review, further to which they provided correspondence to Council requesting additional information in regard to some of the issues addressed in the TA. This correspondence, dated 1/11/2023 (the **TfNSW RFI**) relates to the following transport issues:

- The distribution of future Site and WPCA trips to the intersection which will be available at Cargo Road, including a new intersection (**Road 1**) and the existing Cargo Road & Witton Place intersection, and specifically the assignment of Site (and WPCA) trips at these intersections;
- Confirmation of the number of new intersections to Cargo Road from the Site/WPCA;
- Confirmation of the Site's trip generation;
- The provision of appropriate sight distance at the proposed intersection of Cargo Road & Road 1; and

- The design of the intersection of Cargo Road & Road 1 with reference to Austroads warrants.

These issues were specifically addressed in a revised TA 15/11/2023. However, correspondence was subsequently received from Council in 16/11/2023 (**Council RFI**) requesting further clarification of a reference in Section 2.2.3 to the Site generating 5 vehicle trips per hour (**vph**); and a further revised distribution scenario to the Road 1 and Witton Place intersections with Cargo Road from that identified in the TfNSW RFI.

While a revised distribution profile in accordance with the Council RFI has been assessed, from the outset arc traffic + transport wishes to address the reference to 5vph in Section 2.2.3. Both the TfNSW RFI and Council RFI appear to have interpreted these 5vph as being the future trip generation of the Site (further to the Proposal); this is not correct. Rather, Section 2.2.3 relates to the **existing characteristics** of the Site which – based on small number of existing Site dwellings – is estimated to **currently generate approximately 5vph**.

Moreover of course, and as noted in the TfNSW RFI, the assessment of the **future characteristics** of the Site and WPCA provided in Section 5 appropriate considers the much higher generation of the Site further to the Proposal, based on what the TfNSW RFI identifies as *fair and reasonable* [trip generation] *estimates.*

We trust that this information has appropriately resolved this misunderstanding.

1.3 Transport Assessment Tasks

The TA provides an assessment of the relevant access and traffic characteristics of the Proposal; this has included consideration of the following:

- Existing and future base traffic conditions in the local road network providing for the Site;
- Existing and future public and active transport services and infrastructure;
- The future vehicle trip generation and distribution of the Site (and WPCA), and the potential impact of those trips on the local road network and key intersections;
- Pedestrian and cycle connectivity within the Site and to external active transport infrastructure;
- The provision of bus capable roads, and potential bus routes, within and through the Site;
- The proposed intersection of the Site and Cargo Road with reference to the applicable road design guidelines; and
- The proposed internal road network with reference to the applicable road design guidelines.

1.4 Reference Documents

1.4.1 Planning Controls and Strategies

As discussed, the Site lies within the Orange Local Government Area (**LGA**); key Council planning and strategic documents referenced in the preparation of this TA include:

- Orange Development Control 2004 (the **DCP**);

- Orange Local Environmental Plan 2011 (the **LEP**);
- Orange Local Strategic Planning Statement, 2020 (the **LSPS**);
- Orange Local Housing Strategy, 2022 (the **Housing Strategy**);
- Orange Sustainable Settlement Strategy, 2004 (**Settlement Strategy 2004**);
- Orange Sustainable Settlement Strategy, 2010 (**Settlement Strategy 2010**);
- Orange Community Strategic Plan, 2021 (the **Strategic Plan**);
- Orange Active Travel Plan, 2016 (the **Active Plan**); and
- Orange FutureCity Planning & Design Framework, 2020 (**FutureCity Framework**).

1.4.2 Traffic and Transport Guidelines

This TA also references general traffic and transport guidelines, including:

- Guide to Traffic Generating Developments 2002, Roads & Traffic Authority (**RTA Guide**);
- Guide to Traffic Generating Developments – Updated Traffic Surveys 2013, Roads & Maritime (**RMS Guide**);
- Transport for NSW (**TfNSW**) Guidelines for Public Transport Capable Infrastructure in Greenfield Sites, 2018 (**Bus Guidelines**);
- Austroads Guide to Road Design Part 3: Geometric Design (**Austroads GRD Part 3**);
- Austroads Guide to Road Design Part 4: Intersections & Crossings General (**Austroads GRD Part 4**);
- Austroads Guide to Road Design Part 4A: Unsignalised & Signalised Intersections (**Austroads GRD Part 4A**);
- Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossing Management (**Austroads GTM Part 6**);
- Austroads Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments; and
- Transport for NSW (**TfNSW**) Guide to Transport Impact Assessments.

1.5 Consultation

arc traffic + transport has had the opportunity to discuss the Proposal with both Council and TfNSW officers, particularly in regard to existing and future local conditions and the appropriate scope of work provided in this TA.

Council officers have also provided information in regard to other developments in the vicinity of the Site with the potential to generate traffic to the key roads and intersections providing access for the Site; and data from Council's Strategic Traffic Model (the **Orange STM**) which provides forecasts of future traffic volumes.

arc traffic + transport wishes to acknowledge the assistance and insights provided by these officers, including the additional issues identified in the TfNSW RFI and Council RFI.

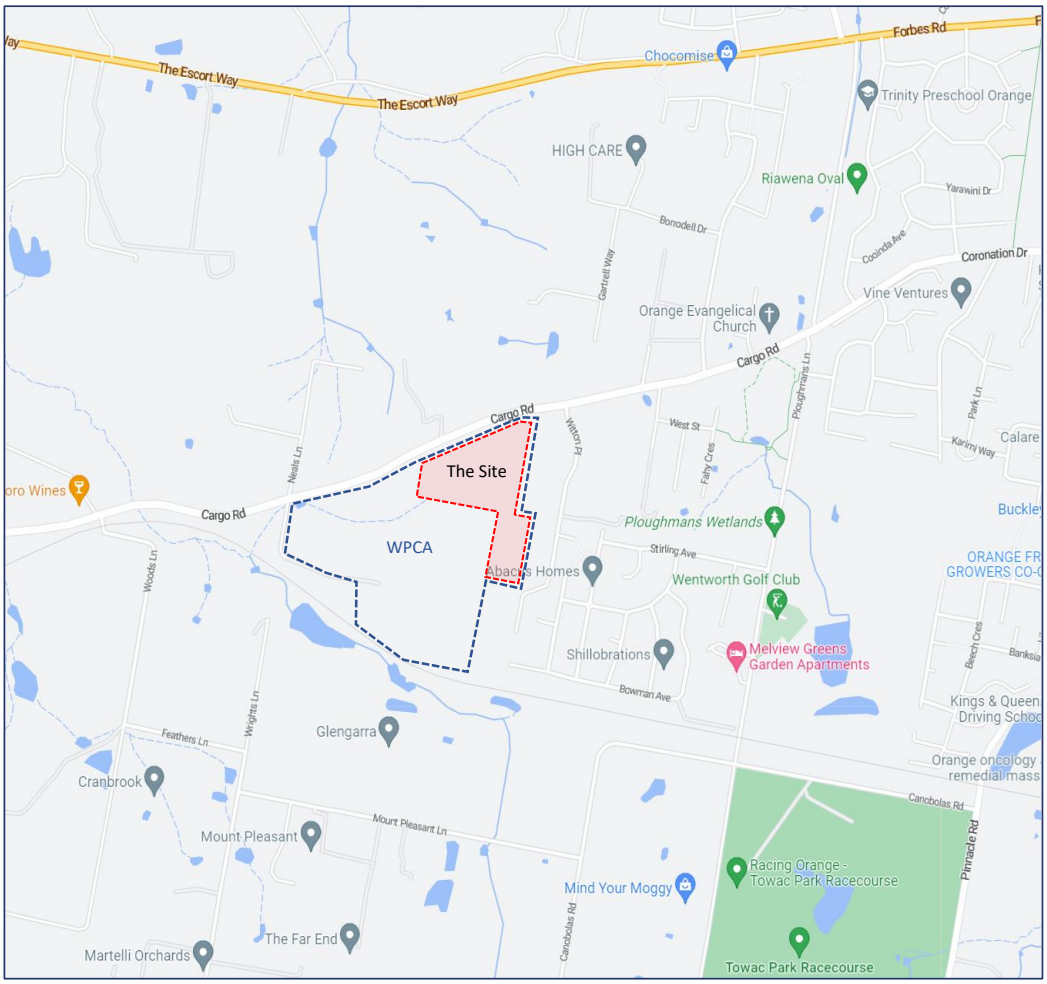
2 Existing Conditions

2.1 Site Location

The Site is officially referenced as Lot A in Deposited Plan 408148, with a street address of 277 Cargo Road, Orange. The Site is generally bordered by Cargo Road to the north, the railway corridor to the south, Witton Place (and existing residential areas) to the east, and pastureland and rural residential properties to the west. As discussed, the Site forms the upper part of the WPCA.

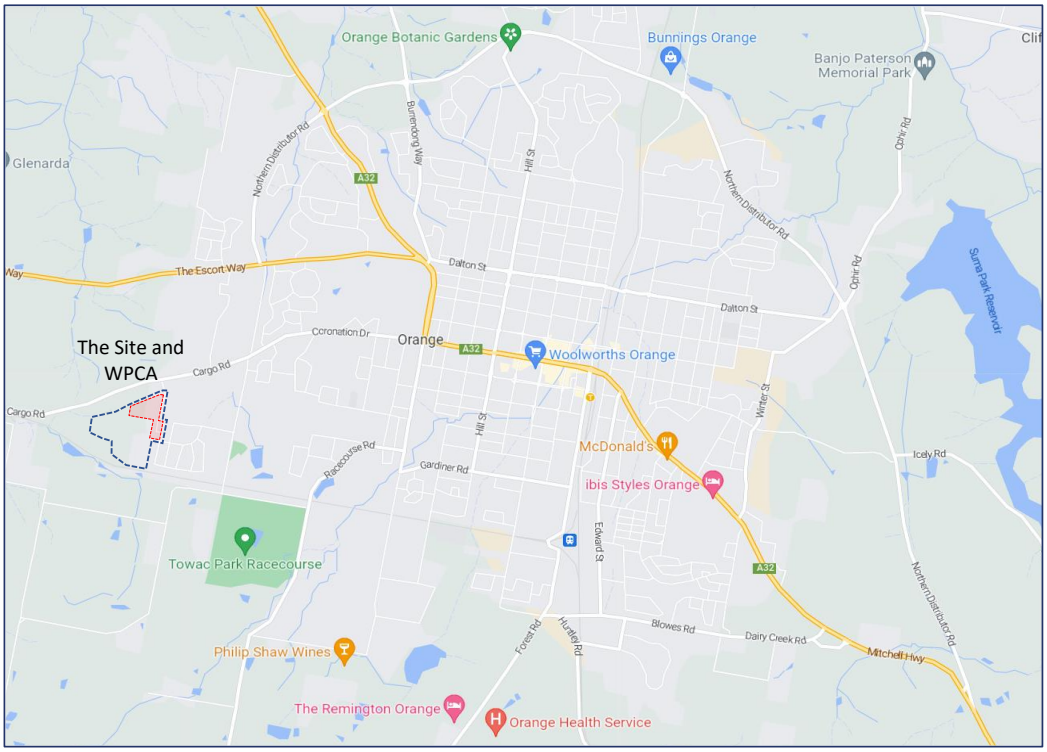
The Site has an area of approximately 11.02 hectares, and is shown in its local context in Figure 1, and broader context within the Orange LGA in Figure 2.

Figure 1: Site Location Local Context



Source: Google

Figure 2: Site Location Sub-Regional Context



Source: Google

2.2 Current Site Characteristics

2.2.1 Site Use

The Site is currently occupied by a number of rural residential properties and pastureland.

2.2.2 Site Access

WPCA access is currently provided via minor rural driveways to Cargo Road, Witton Place and Neals Lane. It is noted from the outset that – in accordance with the Housing Strategy – vehicle access to the Site (and WPCA) will not be provided via Neals Lane (see also Section 3.1), while in the first instance (i.e. further to the development of the Site only) all access will be via Cargo Road.

2.2.3 Trip Generation

With reference to the regional residential trip rates provide in the RMS Guide – being 0.78 and 0.71 trips per dwelling in the AM and PM peak hours respectively - the residential dwellings on the Site would generate no more than 5vph in the peak periods, stressing again that this is the current trip generation of the existing Site dwellings, not a forecast of the future trip generation of the Site further to the Proposal. This level of trip generation would have no impact on the operation of the local road network.

3 Planning Strategies and Controls

3.1 Orange Local Housing Strategy

3.1.1 Overview

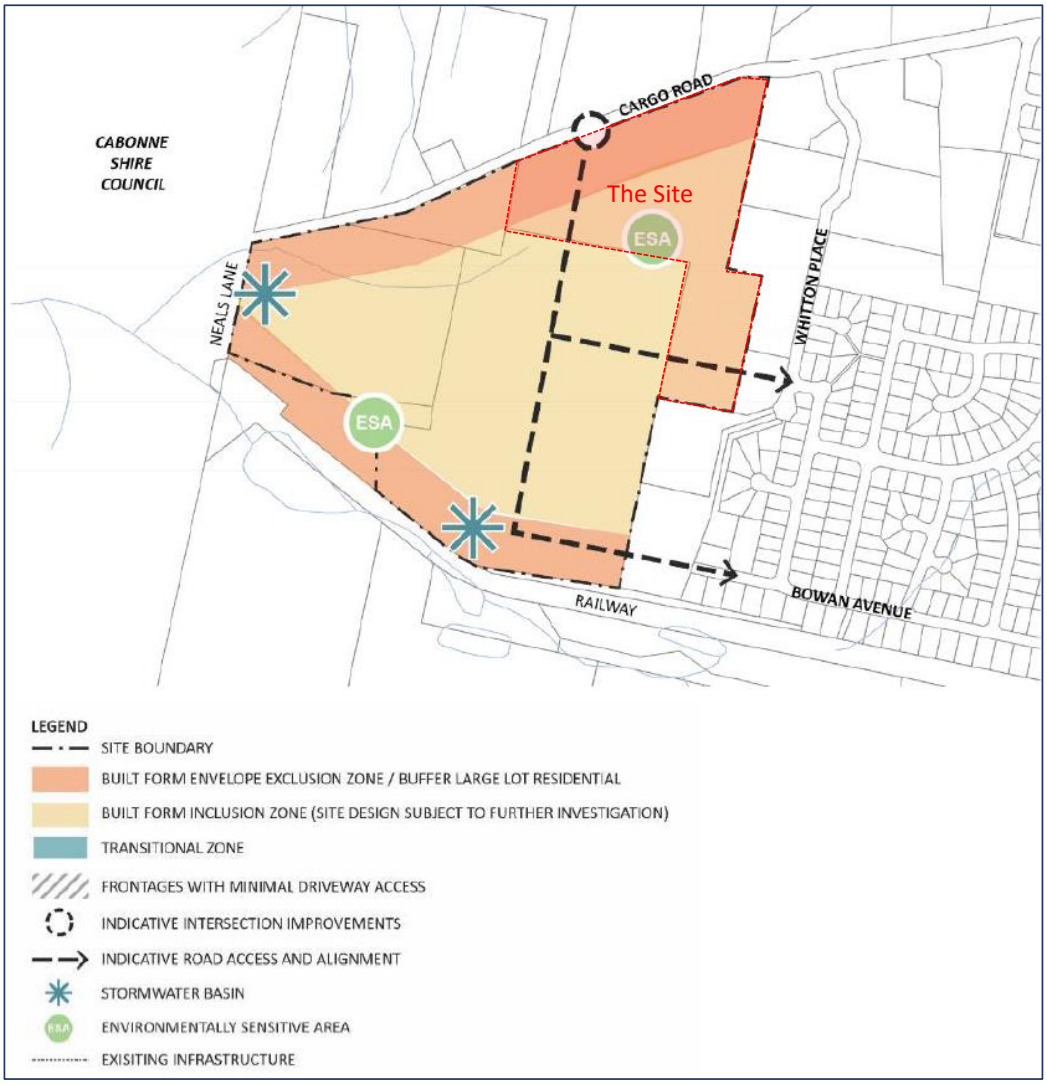
The Housing Strategy was finalised in July 2022, and provides guidance for Council and the private sector in regard to the ongoing delivery of residential dwellings across the LGA, generally matching the need for new dwellings as the population increases with essential consideration of housing diversity; the need to provide infrastructure to new urban release areas; and the need to properly account for environmental constraints.

3.1.2 The Witton Place Candidate Area

The Site lies within what the Housing Strategy identifies as the WPCA, which is generally bordered by Cargo Road to the north, the railway to the south, Witton Place to the east and Neals Lane and rural residential properties to the west.

The WPCA is shown in the figure to Section 8.4.1.2 of the Housing Strategy, which is reproduced below.

Figure 3: Witton Place Candidate Area



Source: Housing Strategy

3.1.3 Housing Strategy Preliminary Assessment of the Witton Place Candidate Area

In the preliminary assessment of the suitability of the WPCA for new residential development, the Housing Strategy examined a range of key considerations for any new development, including items such as heritage, stormwater drainage, biodiversity and the interface with adjoining developments.

With regard to transport, the Housing Strategy specifically determined that a *Traffic Impact Assessment* would be required to accompany any future application so as to ensure that sites within the WPCA could be provided with appropriate internal and interface road network access.

In addition, the Housing Strategy identifies the key considerations/assessment tasks for any such assessment; these include:

- *Minimal access off Cargo Road will be permitted*
- *Any connection to Neals Lane is to be limited to pedestrian / cyclist use only and not allow direct vehicular access to Neals Lane*
- *Internal road networks to extend off Whitton* [sic] *Place to the east and Bowmans Avenue to the south east*
- *Impacts on Whitton Place, Bowmans Avenue and Cargo Road resulting from the increase in traffic volumes*

In addition, the Housing Strategy identifies key traffic and transport infrastructure anticipated to be incorporated into a future WPCA [site-specific] DCP, providing the following in regard to *Transport and Movement Hierarchy/Roads*:

- *Design to avoid road connections westwards to Neals Lane, pedestrian and cyclist linkage only.*
- *Direct access to Cargo Road (maximum two intersections), design and location of intersections to be informed by traffic study.*
- *New intersection off Whitton* [sic] *Place / Taloumbi Place*
  - *Note Lot 1 DP 1217170 is situated between the URA and western end of Taloumbi Place. The strategy supports extending Taloumbi Place through this lot to form a connection to the URA proper. Alternatively the southern end of Lot 6 DP 1045677 could be considered where it aligns with Wirringulla Place.*
- *Additional eastern connection to Bowman Avenue*
  - *Note: Lot 10 DP 1045677 is situated between the URA and the western extent of Bowman Avenue. The strategy supports extending Bowman Avenue through this lot to form a connection to the URA proper*.
- *Upgrade of Cargo Road along the extent of release area frontage, design to be informed by traffic study*
- *Upgrade of Witton Place, design to be informed by traffic study*
- *Upgrade Witton Place / Cargo Road intersection and Neals Lane Intersection, design to be informed by traffic study*
- *Extension of Bowman Avenue to provide connectivity to Witton release area, traffic study to model anticipated traffic volumes through Bowman Avenue to Ploughmans Lane*

In accordance with the Housing Strategy, these considerations/assessment tasks have all been detailed in this TA.

3.2 Additional Council Plans and Strategies

3.2.1 Orange Community Strategic Plan 2018-2028

The Community Plan provides a 10-year vision for the LGA and a series of supporting long-term strategic goals, outcomes, activities and measures. With specific regard to housing, the vision includes a healthy, safe, inclusive and vibrant community balancing the need for growth with due consideration of natural, cultural and historical considerations. The plan also focuses on providing the community with positive choices for investment, employment and study.

3.2.2 Orange Local Strategic Planning Statement 2020

The LSPS contains planning priorities and actions for a 20 year vision for the Orange LGA outlining how growth and change will be managed into the future. Planning priorities specifically relevant to the Proposal include:

- Supporting the development of new homes in residential release areas in West Orange, and increasing the range of housing options in existing urban areas.
- Locating new growth areas with appropriate access to essential services; and
- Ensuring that building design and construction is of a high quality, and maintains residential amenity.

With specific regard to transport, the LSPS provides the following:

> *Traditionally developments are designed to cater for private vehicles with parking requirements being the main focus. Alternative modes of transport include walking, cycling, public transport and ride-share services, all of which are more ecologically sustainable and reduce emissions.*
>
> *Additionally active transport has health benefits and is more readily available to people with limited incomes.*
>
> *Increased density, in appropriate locations, results in a greater local population that may sustain shops and services within a walking distance catchment, negating the need for private transport.*
>
> *Additionally private vehicle ownership forms a significant component of most household budgets. Studies overseas have shown that cyclists spend more money per capita in their local economies, increasing the amount of money in local circulation compared to motorists (given that at least the capital cost of the vehicle leaves the local economy).*
>
> *Council will therefore seek to promote alternative active modes of transport by reviewing development controls so that the built form of the city becomes more accessible over time.*

Pedestrian and cyclist facilities will be elevated in status to match that of other modes of transport and access requirements of all residents, including those with physical or cultural impairment, are given proper consideration.

Further, and again with specific reference to the Proposal, some of the key action items detailed in the LSPS include:

- Requiring new residential subdivisions to include footpaths and pedestrian friendly layouts by minimising path gradients and maximising permeability with mid-block connections.
- Continuous reviews and (where appropriate) updates to Council's broader cycling and pedestrian strategies; and
- Investigating and promoting innovative transport solutions to service schools and other public and community facilities.

3.2.3 Orange FutureCity – Planning and Design Framework

The FutureCity Framework sets out the broad vision and aims for the future of the City to be delivered over the long term through major projects and initiatives, as well as detailed directions to provide more certainty for developers and the broader community.

With specific reference to the Proposal, the FutureCity Framework aims to promote diversity of housing stock, and to create vibrant community environments. These objectives include attracting more people into the City by broadening residential typology choice and reducing the reliance on car usage in favour of promoting active (and public) transport modes.

Notwithstanding that the Site lies outside of the City, the provision of high quality residential dwellings (within the Site and WPCA) allows the City itself to provide a more diverse range of dwelling types, including more high and medium density dwellings - so that a full range of dwelling types will be available to future residents across the City and broader LGA.

3.2.4 Orange Development Control Plan 2004

The DCP provides development controls relating to residential, commercial, industrial and associated infrastructure development. There are also a number of site specific chapters to be considered in the assessment of development applications lodged with Council for particular locations, noting that in developing the Proposal particular consideration has been given to chapters of the DCP relating to new residential subdivision.

Notwithstanding, and as discussed in the Housing Strategy, it is anticipated that a new Site/WPCA-specific DCP (or additional chapter to the existing DCP) will be prepared to govern the development of these new growth areas.

4 Existing Local Conditions

4.1 Key Roads

4.1.1 Cargo Road

Cargo Road is a classified road that runs south-west from central Orange to Cargo and then south to Canowindra. In the vicinity of the Site, it provides 1 traffic lane in each direction and sealed and unsealed verges, and has a posted speed limit of 60km/h (in the vicinity of Witton Place) that then transitions to 80km/h east of Neals Lane.

It is noted that Cargo Road was upgraded in 2019 along the frontage of the Site.

4.1.2 Coronation Drive

Coronation Drive is a classified road that forms an eastern extension of Cargo Road between Ploughmans Lane and the roundabout intersection with Woodward Street & Summer Street (both of which form part of Mitchell Highway). Coronation Drive provides 1 wide traffic lane in each direction, on-street parking and bus stops in kerbside lanes, and has a posted speed limit of 60km/h.

4.1.3 Witton Place

Witton Place is a local road that runs north-south between Cargo Road and a terminus north of Bowman Avenue. It provides 1 traffic lane in each direction, on-street parking and bus stops in kerbside lanes, and has a posted speed limit of 50km/h.

4.1.4 Taloumbi Place

Taloumbi Place is a local road that runs east and then south from Witton Place to Bowman Avenue, and provides access to other local roads providing access for the small residential precinct east of Witton Place. It provides 1 traffic lane in each direction, on-street parking and bus stops in kerbside lanes, and has a posted speed limit of 50km/h.

4.1.5 Neals Lane

Neals Lane is a minor access lane that runs south from Cargo Road, and provides access for a small number of rural residential properties. While Neals Lane nominally provides access to the WPCA, in accordance with the Housing Strategy no vehicle access will be provided between the WPCA and Neals Lane.

4.1.6 Other Local Roads

There are a number of local roads within the residential precinct east of the WPCA that provide access to the sub-regional network via Ploughmans Lane, with routes (from Witton Place) including Bowmans Avenue, Isaac Drive and Sterling Avenue. These local roads all provide 1 traffic lane in each direction and on-street parking.

arc traffic + transport notes that while the Housing Strategy requires an assessment of the future operation of Bowmans Avenue, there is little if any potential for trips generated by the Site (and WPCA) to use local routes to the east (including the local roads identified above) as they do not provide a more efficient route for the overwhelming majority of trips other than perhaps to the small number of destinations in Ploughmans Lane south of Cargo Road.

Rather, the future routes available from the Site (and WPCA) to Cargo Road directly or via Witton Place would be significantly more efficient to almost all destinations in Orange via the intersection of Coronation Drive & Woodward Street & Summer Street.

More details in regard to the potential trip generation of the Site and WPCA to these local roads is provided in Section 5.9.

4.2 Key Intersections

4.2.1 Cargo Road & Witton Place

This intersection operates under priority (Give Way) control, with priority to Cargo Road. It provides relatively significant auxiliary lane infrastructure given the very moderate traffic volumes in Witton Place, including:

- A Channelised Right (**CHR**) treatment, Cargo Road to Witton Road;
- An Auxiliary Left (**AUL**) treatment, Cargo Road to Witton Place; and
- A Basic Left (**BAL**) treatment, Witton Place to Cargo Road.

Based on our discussions with TfNSW, it is understood that the intersection was upgraded to provide this more extensive turn lane infrastructure as a function of sight distances to the intersection, noting that the traffic volumes currently generated to/from Witton Place would be unlikely to warrant (with reference to Austroads GTM Part 6) these higher order treatments.

A more detailed assessment of this intersection is provided in later sections of this TA.

4.2.2 Cargo Road & Neals Lane

This intersection operates under priority (Give Way) control, with priority to Cargo Road. It provides no significant auxiliary lane infrastructure, with the Neals Lane approaches (north and south) providing only simple BAL treatments.

Noting the Housing Strategy's requirement for a more detailed assessment of this intersection further to the development of the WPCA, it is the opinion of arc traffic + transport that the intersection would generally be unaffected by future development as a function of:

- The relatively minor traffic volumes in Cargo Road (see also Section 4.3);
- The very minor traffic volumes in Neals Lane both north and south of Cargo Road; and

- As discussed in Section 3.1.3, the Housing Strategy does not provide for WPCA vehicle access via Neals Lane, and as such there is little potential for traffic volumes in Neals Lane south of Cargo Road to increase.

4.2.3 Local Intersections

All local intersections in the residential areas east of Witton Place operate under basic Give Way control, or as 1 lane roundabouts. As previously discussed, the Site and WPCA are unlikely to generate any significant number of trips to these local intersections, which regardless provide significant spare capacity given the very minor traffic volumes that they accommodate.

4.3 Existing Traffic Volumes

4.3.1 Traffic Surveys

arc traffic + transport engaged Traffic Information Specialists to undertaken peak period intersection and classified (tube) counter surveys at key locations in the local road network to better inform the TA. The surveys were conducted in March 2023, and include:

- Peak period traffic volumes at the intersections of Cargo Road & Witton Place; and
- Classified counter (24/7) surveys in Cargo Place east of Witton Place, and in Witton Place south of Cargo Road.

The full survey data set is provided in Appendix A.

4.3.2 Existing Traffic Volumes

The peak hour traffic volumes at the intersection of Cargo Place & Witton Place and Witton Place & Taloumbi Place are shown in Figure 4, while Table 1 and Table 2 provide a summary of average daily traffic volumes in Cargo Road and Witton Place respectively.

Figure 4: 2023 Peak Hour Traffic Volumes

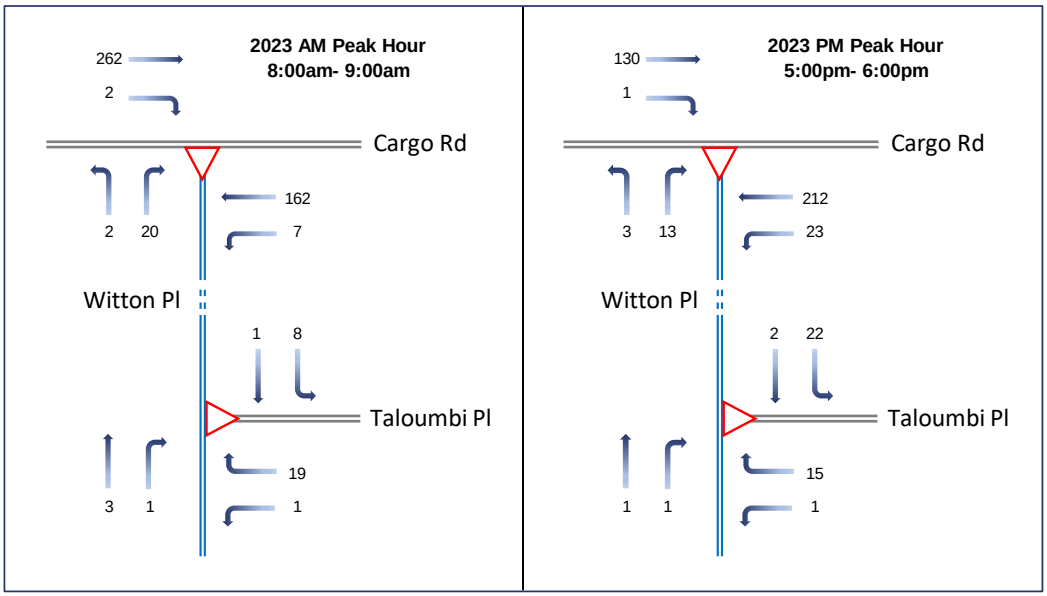


Table 1:Cargo Road Average Daily Traffic Volumes

Time	Mon		Tue		Wed		Thu		Fri		Sat		Sun		7 Day Total	
	6-Mar		7-Mar		1-Mar		2-Mar		3-Mar		4-Mar		5-Mar			
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
0:00	2	3	4	5	3	5	3	7	2	5	5	1	9	7	28	33
1:00	1	0	1	2	0	0	2	0	2	1	5	1	0	2	11	6
2:00	3	2	2	1	1	2	1	1	1	1	1	4	2	0	11	11
3:00	4	1	2	4	2	1	0	2	2	3	0	1	0	1	10	13
4:00	8	15	7	11	8	14	6	10	9	10	1	4	4	3	43	67
5:00	20	49	29	46	35	44	20	37	20	37	12	13	6	7	142	233
6:00	78	74	76	85	68	82	71	73	75	75	37	26	21	27	426	442
7:00	85	134	119	154	152	136	102	155	104	107	84	68	42	31	688	785
8:00	125	276	150	282	157	264	151	260	170	255	93	107	99	57	945	1501
9:00	124	150	120	134	115	140	114	141	150	163	174	172	157	112	954	1012
10:00	111	101	104	106	105	117	110	137	147	133	190	205	202	140	969	939
11:00	112	121	113	110	126	133	114	107	135	140	218	184	241	176	1059	971
12:00	126	105	113	112	120	114	110	117	118	112	208	186	222	206	1017	952
13:00	92	104	120	131	130	98	132	128	154	116	226	164	201	186	1055	927
14:00	131	100	115	136	131	129	125	124	169	169	192	189	165	183	1028	1030
15:00	167	169	179	185	185	183	209	206	212	180	160	200	156	176	1268	1299
16:00	210	154	207	160	178	158	212	173	211	160	115	168	136	180	1269	1153
17:00	200	126	226	108	233	148	274	133	197	155	95	150	95	164	1320	984
18:00	126	89	147	92	119	94	136	108	124	103	58	97	68	114	778	697
19:00	67	64	76	69	76	106	84	109	73	64	46	47	55	58	477	517
20:00	47	30	37	28	50	44	29	42	42	50	34	30	35	39	274	263
21:00	19	6	29	20	35	19	27	25	42	31	29	26	13	20	194	147
22:00	9	7	13	13	7	5	5	19	23	25	18	16	8	9	83	94
23:00	10	4	6	18	6	8	7	10	13	31	20	16	5	4	67	91
07-19	1609	1629	1713	1710	1751	1714	1789	1789	1891	1793	1813	1890	1784	1725	12350	12250
06-22	1820	1803	1931	1912	1980	1965	2000	2038	2123	2013	1959	2019	1908	1869	13721	13619
06-00	1839	1814	1950	1943	1993	1978	2012	2067	2159	2069	1997	2051	1921	1882	13871	13804
00-00	1877	1884	1995	2012	2042	2044	2044	2124	2195	2126	2021	2075	1942	1902	14116	14167

Source: TIS Surveys

Table 2: Witton Place Average Daily Traffic Volumes

Time	Mon		Tue		Wed		Thu		Fri		Sat		Sun		7 Day Total	
	6-Mar		7-Mar		1-Mar		2-Mar		3-Mar		4-Mar		5-Mar			
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
0:00	0	0	0	1	0	0	0	1	0	0	0	1	0	2	0	5
1:00	0	0	0	0	0	0	0	1	0	0	0	0	2	1	2	2
2:00	0	0	0	0	0	0	1	0	0	0	1	2	1	2	3	4
3:00	0	0	0	0	0	0	1	0	0	0	0	2	0	0	1	2
4:00	3	0	3	0	2	1	2	0	3	0	1	0	1	1	15	2
5:00	5	0	2	0	7	0	3	0	6	1	3	0	5	1	31	2
6:00	9	3	10	4	7	3	10	2	8	4	1	0	0	1	45	17
7:00	10	9	21	9	16	11	16	11	11	9	4	3	4	2	82	54
8:00	24	6	19	8	22	8	29	9	26	9	11	5	14	3	145	48
9:00	11	12	8	11	13	10	9	9	12	7	13	11	14	7	80	67
10:00	7	4	12	7	12	6	6	9	15	14	22	13	15	25	89	78
11:00	5	10	5	8	10	9	12	15	11	6	20	13	8	8	71	69
12:00	7	13	5	6	14	11	10	12	14	18	16	18	15	21	81	99
13:00	11	6	5	9	11	9	12	12	15	17	12	17	9	15	75	85
14:00	6	8	11	10	12	13	12	8	13	14	14	21	13	10	81	84
15:00	13	18	12	17	5	19	10	24	21	20	3	10	10	12	74	120
16:00	4	14	9	26	15	24	20	20	15	11	6	10	8	12	77	117
17:00	7	23	10	20	10	20	15	25	10	29	9	18	11	15	72	150
18:00	5	11	8	19	6	24	8	17	12	14	6	10	8	12	53	107
19:00	9	13	5	6	8	14	10	20	9	18	7	8	4	3	52	82
20:00	3	4	4	4	3	5	4	7	2	5	5	5	5	5	26	35
21:00	1	4	0	3	1	3	1	3	3	6	2	1	1	3	9	23
22:00	2	2	1	1	1	3	0	1	2	3	0	2	0	0	6	12
23:00	0	0	0	2	0	0	0	0	0	3	2	3	1	0	3	8
07-19	110	134	125	150	146	164	159	171	175	168	136	149	129	142	980	1078
06-22	132	158	144	167	165	189	184	203	197	201	151	163	139	154	1112	1235
06-00	134	160	145	170	166	192	184	204	199	207	153	168	140	154	1121	1255
00-00	142	160	150	171	175	193	191	206	208	208	158	173	149	161	1173	1272

Source: TIS Surveys

4.4 Existing Intersection Operations

4.4.1 SIDRA

The operation of the key intersections has been assessed using the SIDRA intersection model. SIDRA provides a number of outputs by which to measure the performance of an intersection, including:

- **Degree of Saturation:** Degree of Saturation is defined as the ratio of demand (arrival) flow to capacity. Degrees of Saturation above 1.0 represent over-saturated conditions (demand flows exceed capacity) and degrees of saturation below 1.0 represent under-saturated conditions (demand flows are below capacity)
- **Average Vehicle Delay:** Average Vehicle Delay represents the difference between interrupted and uninterrupted travel times through an intersection, and is measured in seconds per vehicle in this assessment. Delays include queued vehicles accelerating and decelerating from/to the intersection stop, as well as general delays to all vehicles travelling through the intersection.
- **Level of Service:** Level of Service is a basic performance parameter assigned to an intersection based on average delay; we note that we have assessed the intersections using the RTA parameters which use only delay in the calculation of Level of Service.

  For priority controlled intersections, Level of Service is based on the worst minor approach movement delay.

Table 3 provides a summary of the SIDRA recommended criteria for the assessment of intersections.

Table 3: SIDRA Level of Service Criteria

Level of Service	Average Delay (seconds per vehicle)	Traffic Signals & Roundabouts	Stop & Give Way
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

Source: SIDRA Systems

4.4.2 Existing Intersection Operations

The results of the SIDRA analysis of the existing operation of the intersection of Cargo Road & Witton Place are summarised in Table 4, and detailed SIDRA Movement reports are provided in Appendix B.

Table 4: 2023 Intersection Operations

Base 2023	Level of Service		Average Delay (s)		Worst Delay (s)		Degree of Saturation	
	AM	PM	AM	PM	AM	PM	AM	PM
Cargo Road & Witton Place	A	A	0.5	0.7	8.3	7.4	0.146	0.118
Witton Place & Taloumbi Place	A	A	4.0	4.3	4.6	4.6	0.016	0.014

With reference to Table 4, all of the key intersections operate at a good Level of Service, with minimal delays and significant spare capacity, simply as a factor of good intersection infrastructure and minimal traffic volumes.

4.5 Environmental Capacity

The RTA Guide provides guidance in the determination of appropriate traffic volumes for local roads such as Witton Place and Taloumbi Place that considers their *environmental capacity*, which essentially relates to the amenity of a road based on broader use of the road and adjacent dwellings/sites. In this regard, Table 4.6 of the RTA Guide is reproduced below.

Table 5: RTA Guide Environmental Capacity Performance Standards

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Source: RTA Guide

With reference to the traffic survey data, peak hour traffic volumes in both Witton Place and Taloumbi Place represent only a small percentage of the *environmental goal* volumes for a *Local Street*.

4.6 Future Base Traffic Volumes

4.6.1 Overview

So as to provide an appropriate assessment of future base conditions, arc traffic + transport has developed Base 2033 traffic volumes in Cargo Road in the vicinity of the Site so as to determine what road network upgrades might be required to accommodate those Base 2033 volumes, and then any additional upgrades that might be required to accommodate the traffic volumes generated by the Site and WPCA.

Sections below provide more detail in regard to the development of the Base 2033 traffic volumes, and an assessment of road network operations under Base 2033 conditions.

4.6.2 Orange Strategic Traffic Model

Given that the only real potential for additional traffic volumes to impact the local road network would be in the immediate vicinity of the Site along Cargo Road, the traffic assessment has focused on potential traffic growth in Cargo Road along the Site frontage (where a new access intersection is proposed) and in Cargo Road through the intersection with Witton Place.

Forecasts for this growth have been determined with reference to the Orange STM, data from which has been provided by Council for the 2018 and 2028 base years. The 2018 volumes were calibrated using surveys across the Orange road network, while the 2028 volumes include additional development that has been identified by Council as being completed prior to 2028.

4.6.3 Cargo Road Annual Average Traffic Growth

In Cargo Road, the Orange STM data indicate very moderate average growth between 2018 and 2028 in the AM peak period, and indeed a reduction in traffic volumes in the PM peak. In this regard:

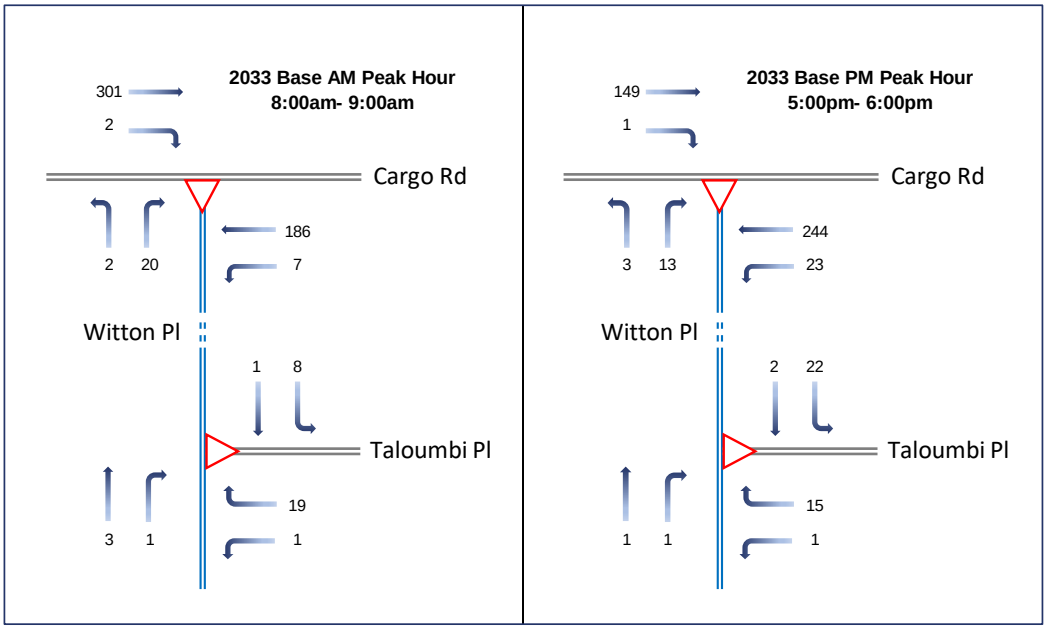
- Traffic volumes in Cargo Road increased by approximately 0.8% per annum in the AM peak; and
- Traffic volumes in Cargo Road decreased by approximately 2.8% per annum in the PM peak.

There is little information available as to why the traffic volumes would decrease to this extent in the PM peak; regardless though, to provide an appropriate level of sensitivity in the assessment of future conditions, arc traffic + transport has factored the surveyed traffic volumes in both peak periods by 1.5% per annum through 2033 so as to effectively reflect worst case conditions.

4.6.4 Base 2033 Traffic Volumes

Further to the above, the Base 2033 peak hour traffic volumes are shown in Figure 5.

Figure 5: Base 2033 Peak Hour Base Traffic Volumes



4.6.5 Base 2033 Intersection Operations

The SIDRA model has been used to determine the operation of the intersection of Cargo Road & Witton Place; the results of this analysis are summarised in Table 6, and detailed SIDRA Movement reports are again provided in Appendix B.

Table 6: Base 2033 Intersection Operations

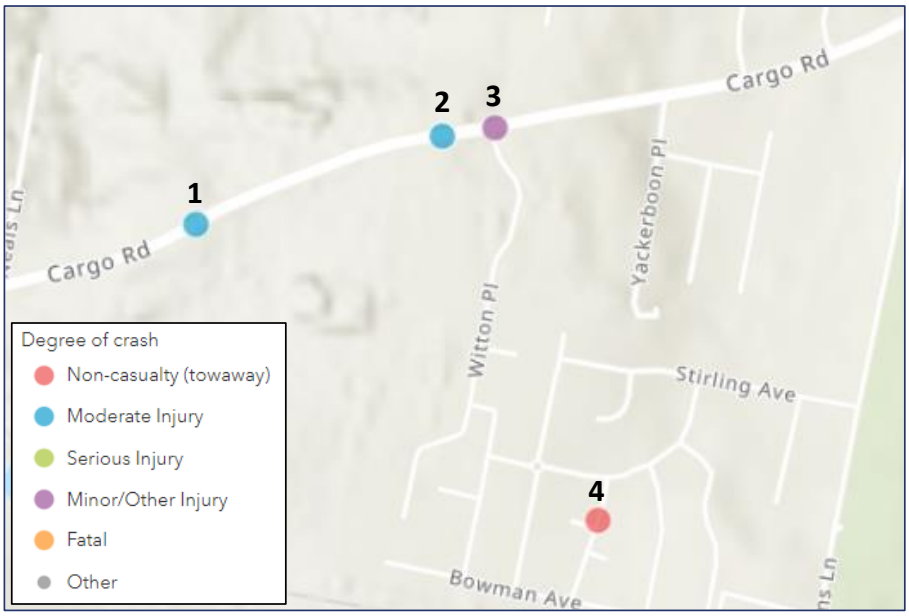
Base 2023	Level of Service		Average Delay (s)		Worst Delay (s)		Degree of Saturation	
	AM	PM	AM	PM	AM	PM	AM	PM
Cargo Road & Witton Place	A	A	0.5	0.7	8.3	7.4	0.146	0.118

With reference to Table 6, the intersection of Cargo Road & Witton Place continues to operate at a good Level of Service under Base 2033 conditions.

4.7 Crash Data

Crash data is available from TfNSW's Centre for Road Safety, and provides information about crashes in the vicinity of the Site between 2017 and 2021 inclusive; a summary of crash locations is provided in Figure 6, while Table 7 provides additional details in regard to each crash.

Figure 6: Crash Locations 2017 - 2021



Source: TfNSW

Table 7: Crash Details 2017 - 2021

Location	Year	Crash Severity	RUM Code	RUM Description	Conditions
1	2017	Moderate	71	Off Road L Object	Dawn
2	2019	Moderate	71	Off Road L Object	Daylight
3	2017	Minor	13	Right Near	Daylight
4	2021	No Injury	71	Off Road L Object	Darkness

Source: TfNSW

With reference to the crash data, there does not appear to be any speeding or fatigue characteristics identified in these crashes, nor indication that the road/intersection design at each location provides an unsafe environment. As such, it is anticipated that most of these crashes were simply the result of human error.

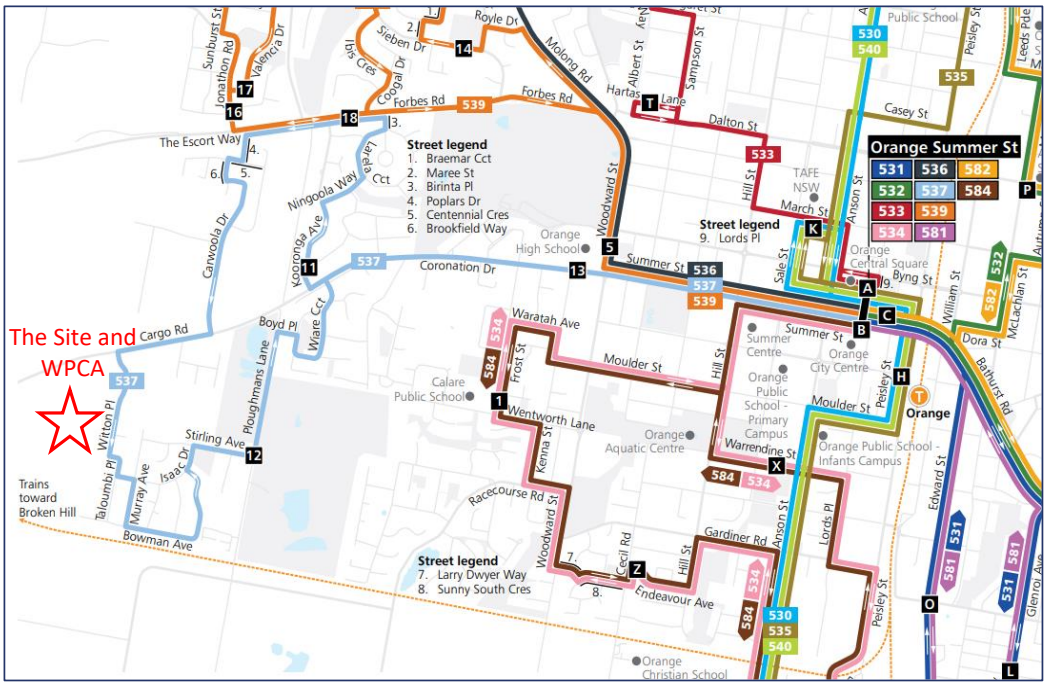
4.8 Public Transport Services

4.8.1 Existing Bus Services

Bus services in Orange have increased in recent years as a specific priority of TfNSW and Council to ensure that more transport options are available to residents across the LGA; bus services are currently operated by Orange Buslines.

Route 537 is a loop (one-way) service that operates between the City Centre and West Orange at a 2-hour headway on weekdays and Saturdays, with a bus stop located on the eastern side of Witton Place immediate south of Cargo Road. Route 537 is shown in Figure 7.

Figure 7: Bus Route 537



Source: Orange Buslines

4.8.2 Future Bus Services

At this time, no additional bus services are proposed that would provide additional public transport accessibility for the Site and WPCA. Notwithstanding, bus services have been expanding across the LGA, with TfNSW announcing an additional 200 daily services in September 2022, particularly to and through the City Centre, and links to key destinations such as Orange Hospital.

The challenge of providing additional bus services is acknowledged in Section 7.7. of FutureCity, particularly given the relatively low density of the outer suburbs (and indeed anywhere outside of the City core) and the dispersed nature of destinations. Notwithstanding, FutureCity acknowledges that there is a demand for public transport, and moreover additional services are required to provide an equitable transport environment.

While FutureCity acknowledges that new strategies will need to be developed to achieve more positive public transport outcomes, it identifies the potential for on-demand services and the better uses of [largely school] buses during of peak periods. These are certainly strategies that can be examined further by Council and TfNSW as residential development continues within the broader City.

4.9 Active Transport

4.9.1 Existing Active Transport Infrastructure

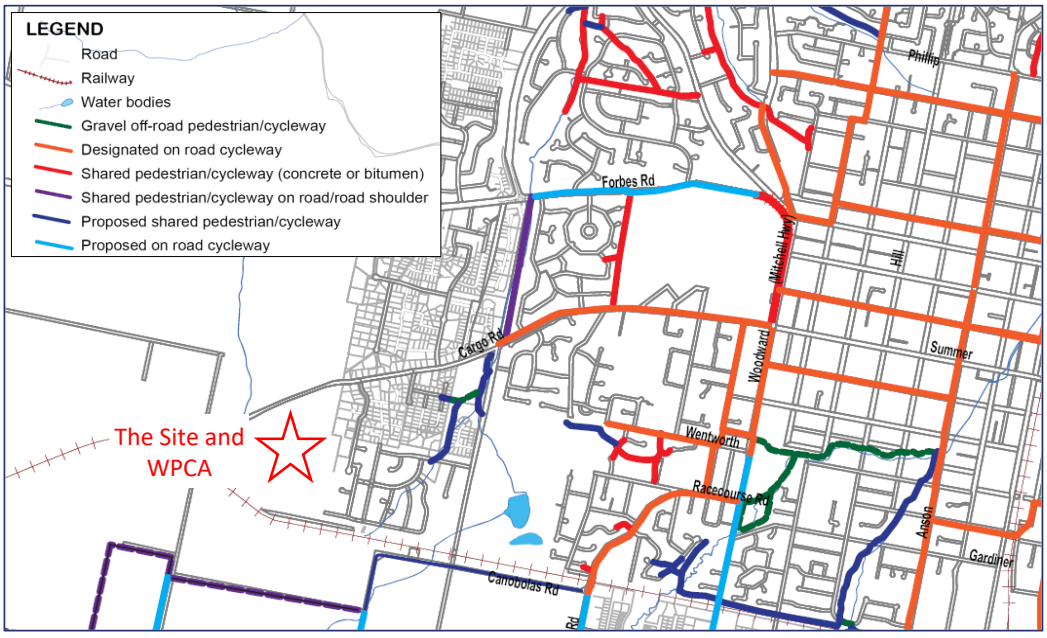
The majority of local roads in the vicinity (east) of the Site do not provide any active transport infrastructure. However, as part of the upgrade of Cargo Road, Council installed a shared path on the southern side of the road that extends from Witton Place east to the Ploughmans Wetlands (which provide numerous pedestrian and cycle paths) and then through the intersection with Ploughmans Lane, where a pedestrian refuge provides access to a pedestrian path that runs along the northern side of Cargo Road through to the City Centre.

A marked on-road cycleway is also provided on both sides of the road in Cargo Road and Coronation Drive through to Woodward Street

4.9.2 Future Active Transport Infrastructure

Existing and future active transport infrastructure is shown in Figure 11 of the Active Plan, which is reproduced below, noting that the Active Plan does not show the recently constructed shared path in Cargo Road as discussed above.

Figure 8: Orange Active Travel Plan Existing and Proposed Infrastructure



Source: Active Travel Plan

Regardless, the Proposal will provide for connections from the internal active transport network within the Site to the adjacent active transport infrastructure in Cargo Road, and to the active transport networks to be provided across the WPCA (see also Section 0).

5 The Proposal

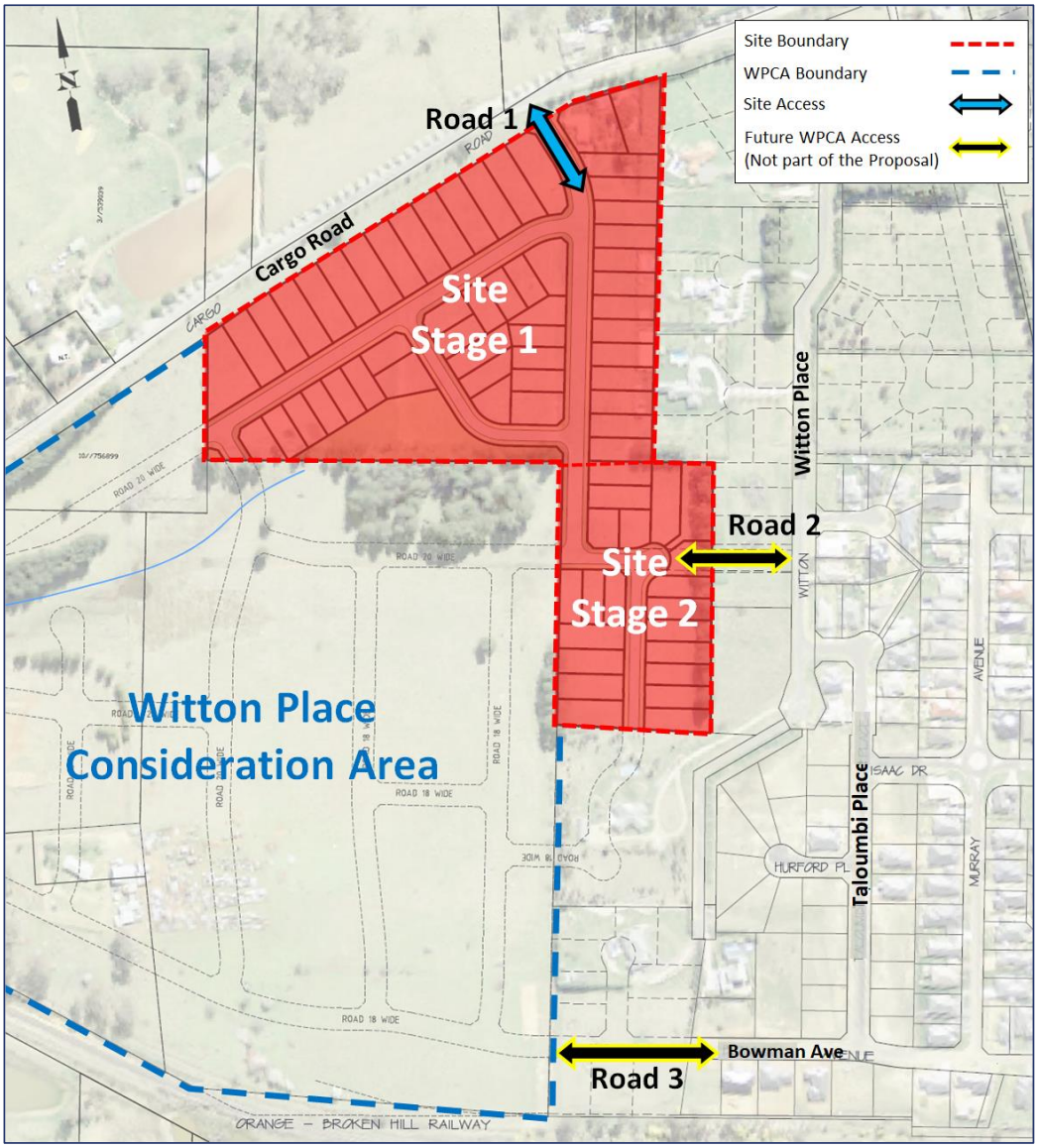
5.1 Overview

As discussed in the Introduction, the Proposal provides for the development of a residential subdivision on the Site; the Proposal would provide for approximately 72 residential lots. It is anticipated that the Site will be developed in 2 stages, with Stage 1 including the lots in the north part of the Site – as well as the new access road to Cargo Road (see also Section 5.2.2); and Stage 2 being the lots in the southern part of the Site west of Witton Place.

Given that the Site lies within the broader WPCA, a Concept Plan has been prepared by Heath Consulting Engineers that includes not only the Site but also the eastern part of the WPCA, which is particularly important so as to show future access not only for the Site but for the whole WPCA. It is noted that while the Concept Plan shows the proposed layout of the Site in detail, the design of roads/lots in the WPCA would be subject to future assessment by others.

The Concept Plan is shown in Figure 9, and additional detailed plans are provided in the broader Planning Proposal submission.

Figure 9: Planning Proposal Concept Plan



Source: Heath Consulting Engineers and arc traffic + transport

5.2 Access

5.2.1 Overview

The Proposal provides for new access roads to the adjacent road network in accordance with the indicative road access and alignment provisions shown in Section 8.4.1.2 of the Housing Strategy (previously reproduced in Figure 3). Further details in regard to these new road are provided in sections below.

5.2.2 Access to Cargo Road

In accordance with the Housing Strategy, 1 additional access road (termed **Road 1** for ease of reference) will be provided to Cargo Road, which is centrally located along the northern Site frontage, approximately 180m west of Witton Place. The intersection of Cargo Road & Road 1 will provide for all movements to and from the Site (and WPCA).

With reference to the TfNSW RFI, it is reiterated that a second (new) intersection to Cargo Road is not proposed; rather, the discussion in Section 10 below (cited in the TfNSW RFI) relates only to the design of internal roads, not a proposed second collector road intersecting with Cargo Road.

The design of the Cargo Road & Road 1 intersection has been determined further to an assessment of the trip generation (and distribution) of Road 1, and the through traffic volumes and speeds in Cargo Road, and is examined in further detail in Section 5.7.

5.2.3 Access to Witton Place

In accordance with the Housing Strategy, a new road (term **Road 2** for ease of reference) would connect east to Witton Place, anticipated to be opposite or south of Taloumbi Place. It is noted that a small (separate) landholding lies between the Site and Witton Place, and as such the timing and design of Road 2 cannot be determined at this time; moreover, this new road does not form part of the Proposal.

Importantly, Stage 2 of the Proposal does not rely on access being available via Witton Road, but rather access could be provided via an extension of the existing roads in Stage 1 south into Stage 2.

5.2.4 Access to Bowman Avenue

In accordance with the Housing Strategy, a new road (termed **Road 3** for ease of reference) would be constructed as a western extension of Bowman Avenue into the WPCA. As with the Witton Place connection, a small (separate) landholding lies between the WPCA and the existing portion of Bowman Avenue, and as such the timing and design of Road 3 cannot be determined at this time; again therefore, Road 3 does not form part of the Proposal.

5.2.5 Access to Neals Lane

In accordance with the Housing Strategy, no vehicle access would be provided between the WPCS and Neals Lane.

5.3 Public & Active Transport

5.3.1 Bus Accessibility

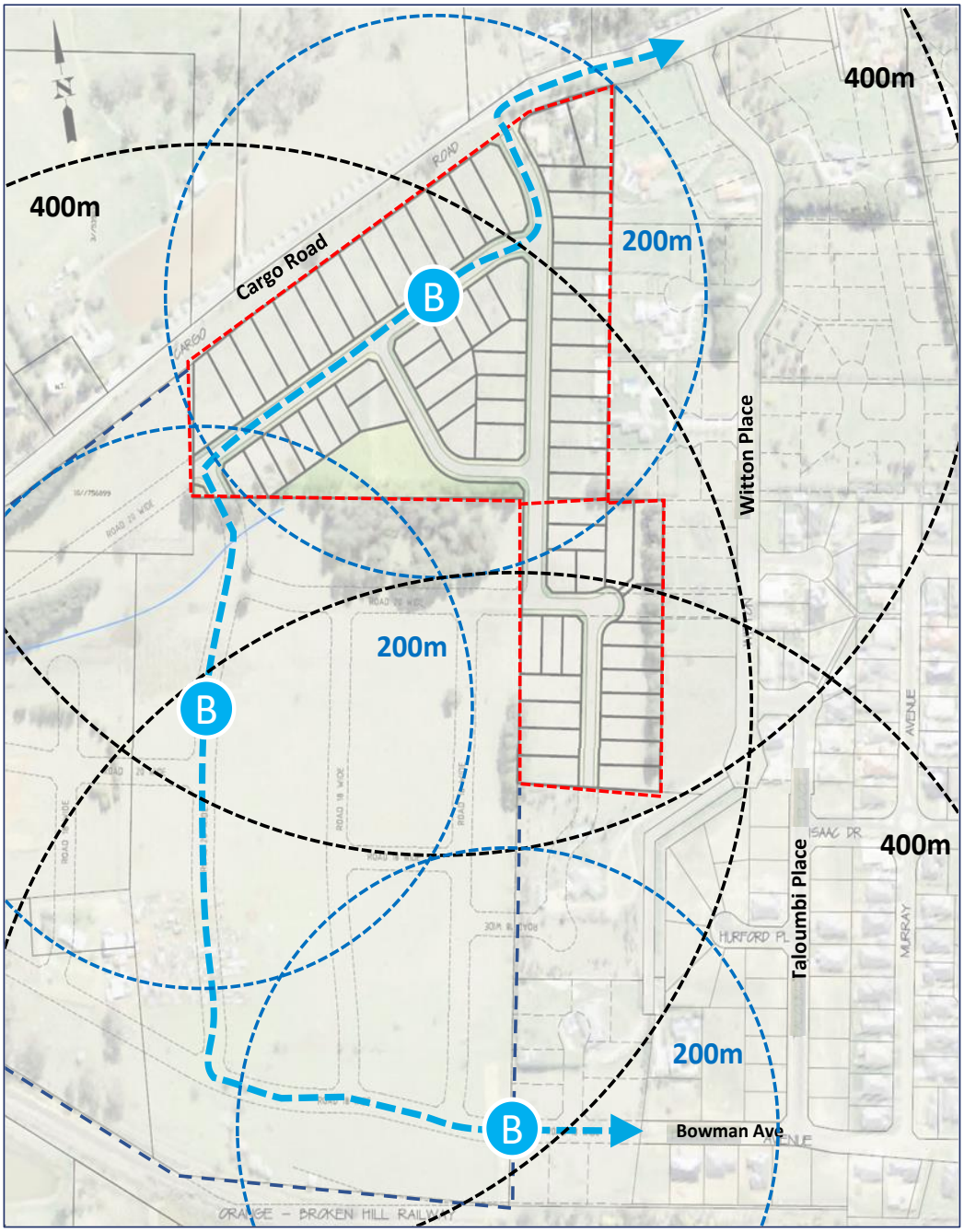
With reference to Section 5.10 below, key internal roads have been designed to the higher urban collector profile so as to provide for future bus accessibility.

In this regard, a review of the design of the local roads east of the Site that are used by buses indicates an 11.0m carriageway in accordance with the urban collector profile. With buses operating in a loop through this area, and moreover only travelling in one direction, this implies the design accommodates:

- 2 x 3.0m travel lanes;
- 1 x 3.0m kerbside parking/bus stop lane; and
- 1 x 2.0m parking lane.

With regard to the travel route, Figure 10 shows a potential route whereby all dwellings lie within 400m of a bus stop, and indeed most dwelling would lie within 200m of a bus stop. This route could then use Road 3 to return to Bowman Avenue, i.e. along the existing Route 537 route. It is likely that this route would be one-way in the first instance (i.e. like route 537) but the potential exists for a two-way route in the future based on growth across West Orange.

Figure 10: Potential Bus Route



5.3.2 Active Transport

As discussed in Section 5.7 below, the proposed road profiles are in accordance with the Subdivision Guidelines for all roads within the Site, which means that footpaths will be provided in all roads as a minimum, while wider paths (essentially operating as shared paths) would also be provided on at least one side of collector (20m wide) roads.

The upgrade of Cargo Road adjacent to the Site will also be constructed to the same profile as the recent upgraded sections of Cargo Road to the east, and as such provide a shared path along the southern side of Cargo Road directly adjacent to the Site. There is excellent potential for future residents to use this infrastructure given that (for example) a cycle ride to the City Centre is approximately 10 minutes.

As outlined in the Housing Strategy, access to Neals Lane would be restricted to active transport modes only; however - and as discussed in Section 5.2.5 - the timing and design of any new active transport infrastructure to Neals Lane will need to be determined as part of future planning for the WPCA, and necessarily consider any adjacent landowners.

At this time, few roads in the existing residential area to the east of the Site provide any pedestrian infrastructure, but there is a relatively extensive path network (including shared paths) through riparian corridors which lead to local recreational facilities. However, it is anticipated the majority of active transport trips will take advantage of the shared paths and on-street cycleways in Cargo Road.

5.4 Trip Generation Rates

The trip generation of the Site and WPCA can be determined with reference to the RMS Guide trip rates for regional dwelling houses which – as discussed in Section 2.2.3 – are 0.78 and 0.71 trips per dwelling in the AM and PM peak hours respectively. Application of these trip rates indicates that:

- The Site would generate 57 vph and 52 vph in the AM and PM peaks respectively;
- The WPCA would generate 82 vph and 75 vph in the AM and PM peaks respectively; and
- The Site and WPCS combined would generate 139 vph and 126 vph in the AM and PM peaks respectively.

As discussed in the TfNSW RFI, these trip generation rates are considered to be *fair and reasonable estimates* of future trip generation, and it is again noted that the reference to 5vph citied in the TfNSW related to the trip generation of the existing Site, not the Site further to the Proposal.

5.5 Trip Distribution

5.5.1 Directional Distribution

As shown in the traffic surveys, it is anticipated that almost all trips generated by the Site and WPCA would be to/from Cargo Road, and in turn a majority would be to/from the east based on the key origins and destinations in Orange and across the LGA.

In turn, 85% of trips have been assigned to/from the east, and 15% of trips assigned to/from the west; it is noted that the TfNSW RFI supports this distribution.

5.5.2 Trip Assignment to Cargo Road Intersections

Further to the full development of the WPCA (including the Site), arc traffic + transport originally estimated that approximately 40% of trips would utilise the intersection of Cargo Road & Road 1, and 60% of trips would utilise the intersection of Cargo Road & Witton Place. This assignment was based on the likely internal road network (within the WPCA) providing more efficient access to Cargo Road via Witton Place for the higher number of dwelling in the central and southern parts of the WPCA. For ease of reference, we have referred to this original assignment as **Assignment 1**.

As discussed, the TfNSW RFI recommended that a different distribution profile to these intersections be assessed, being 60% of trips to/from Cargo Road & Road 1, and 40% of trips to/from Cargo Road & Witton Place. This distribution – referred to as **Assignment 2** – has now been assessed.

The Council RFI has also requested an assessment of a third distribution profile – **Assignment 3** – that provides for 70% of trips to/from Cargo Road & Road 1, and 30% of trips to/from Cargo Road & Witton Place; again, we have now also provided an assessment of this distribution profile.

Finally, so as to provide a worst case assessment of right turn movements from the west (Cargo Road to Road 1) for the warrants assessment provided in Section 5.7.1, all trips to/from the west have been assigned to the Cargo Road & Road 1 intersection.

5.5.3 Trip Assignment to Bowman Avenue

Few if any trips are anticipated to be generated through the adjacent residential area to the east of the Site simply as a function of there being few key origins and destinations provided with more efficient access via these local routes. This in turn indicates that Bowman Avenue – and moreover a western extension of Bowman Avenue – would be seldom used given the circuitous route through the residential area to the east of the Site to Ploughmans Lane and then to Cargo Road.

5.5.4 Arrival and Departure Distribution

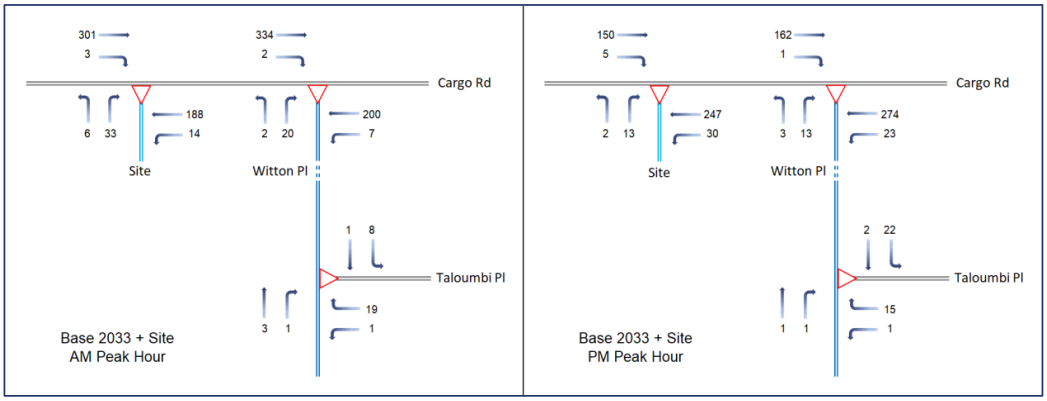
In line with our past assessments of regional residential estates, and with reference to both the traffic surveys and the Orange STMP data, it is anticipated that approximately 30% of trips would be arrival trips and 70% of trips would be departure trips in the AM peak, with the opposite distribution in the PM peak. We note that the TfNSW RFI does not provide any commentary in regard to this arrival and departure distribution profile.

5.6 Future Traffic Volumes

5.6.1 Base 2033 + Site

With reference to sections above, future traffic volumes at the key intersections under a Base 2033 + Site scenario are shown in Figure 11, noting that until such time as the broader WPCA (and other small landholding) was developed, Site access would be provided by the Cargo Road & Road 1 intersection only.

Figure 11: Base 2033 + Site Traffic Volumes



5.6.2 Base 2033 + Site + WPCA

With reference to sections above, future traffic volumes at the key intersections under a Base 2033 + Site + WPCA consider that road network access would be available via Road 1, Road 2 and Road 3 to the adjacent road network.

The figures below provide a summary of future traffic volumes at the key intersections based on the distribution profiles discussed in Section 5.2.2, being:

- **Assignment 1:** 40% to Cargo Road & Road 1, 60% to Cargo Road & Witton Place;
- **Assignment 2:** 60% to Cargo Road & Road 1, 40% to Cargo Road & Witton Place; and
- **Assignment 3:** 70% to Cargo Road & Road 1, 30% to Cargo Road & Witton Place.

Figure 12: Base 2033 + Site + WPCA Assignment 1

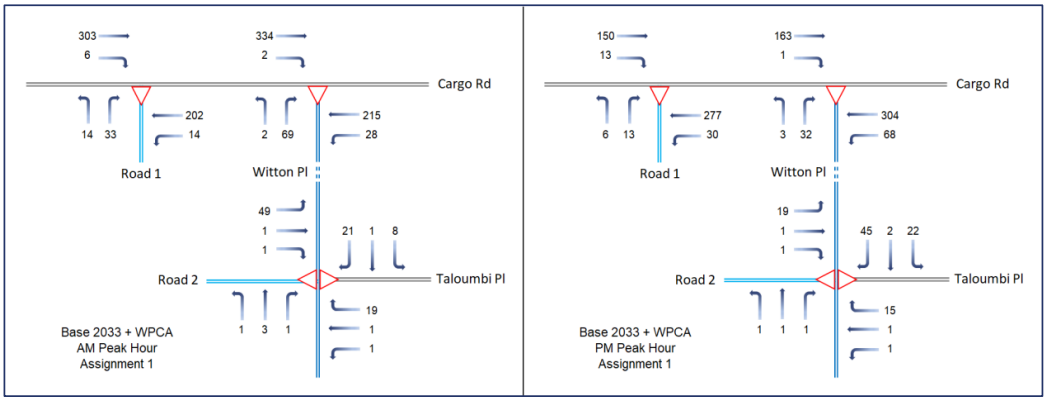


Figure 13: Base 2033 + Site + WPCA Assignment 2

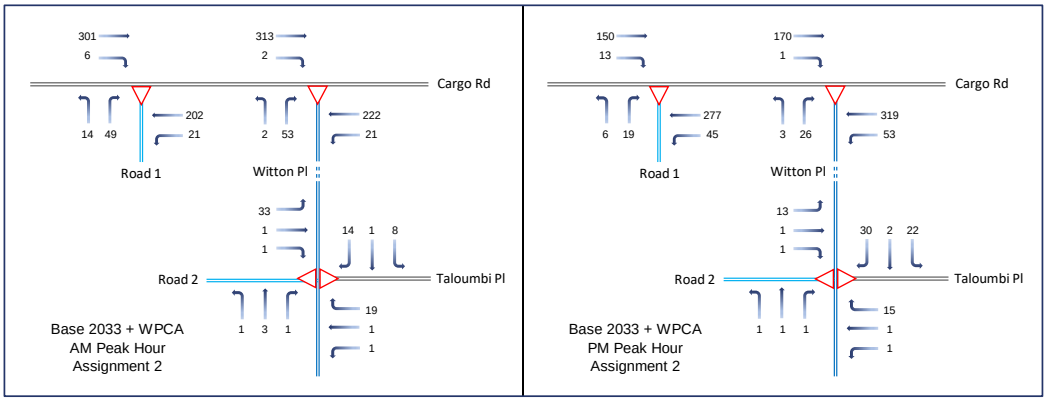
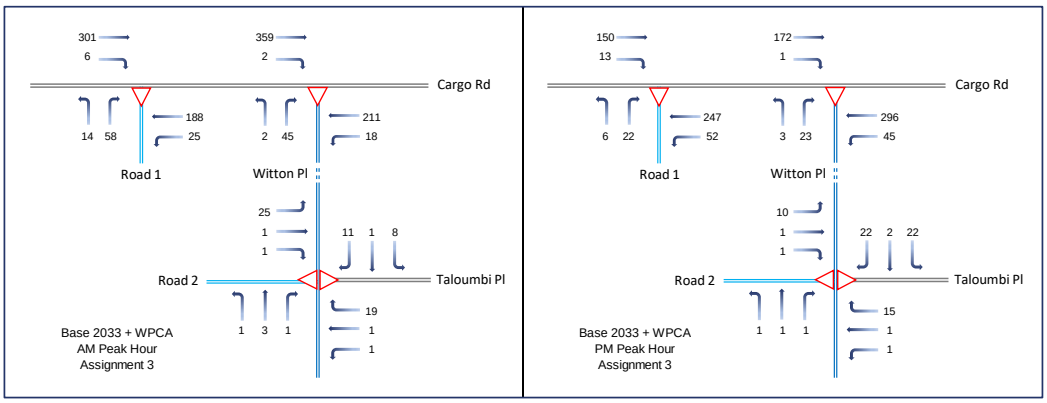


Figure 14: Base 2033 + Site + WPCA Assignment 3



5.7 Intersection Design: Cargo Road & Road 1

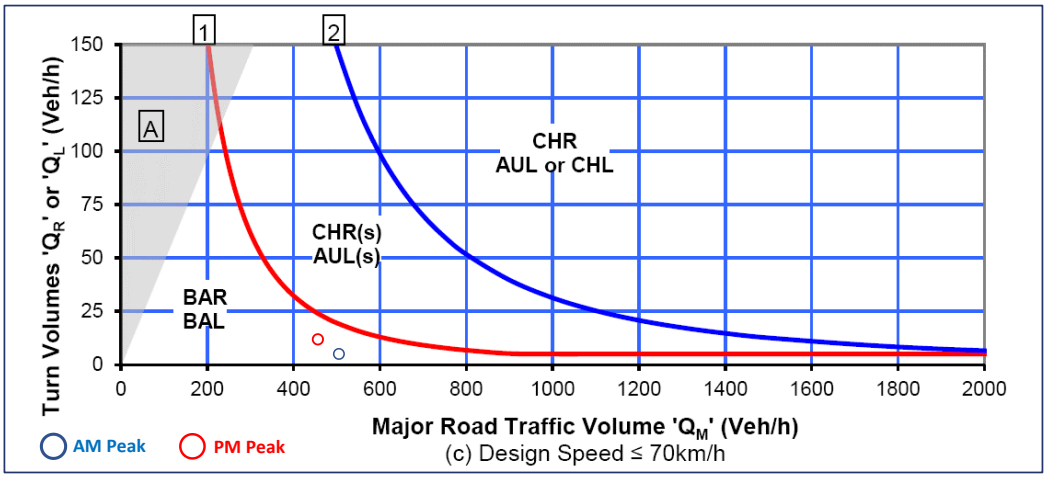
5.7.1 Design Warrants

Warrants for the design of new intersections in urban areas are discussed in Section 3.3.6 of Austroads GTM Part 6, and reference the traffic volumes in the major road (Cargo Road) and the minor road (Road 1), and the design speed of the major road so as to determine the appropriate intersection treatment.

Figure 3.25 of Austroads GTM Part 6 – which provides warrants for roads with a design speed up to 70km/h - is reproduced below. This also shows the future right turn traffic volumes to Road 1 from Cargo Road during the AM and PM peaks further to the Assignment 3 distribution profile, which assigns the same number of trips to the right turn movement, Cargo Road to Road 1, as the other assignments, but has the highest left turn volume, Cargo Road to Road 1, noting that this is considered an opposing traffic volume (to the right turn movement, Cargo Road to Road 1).

It is noted that based on the warrants, only Basic Left (**BAL**) treatments are required for all left turn movements under both distribution scenarios.

Figure 15: Austroads GTM Part 6 Intersection Design Warrants AM Peak Hour



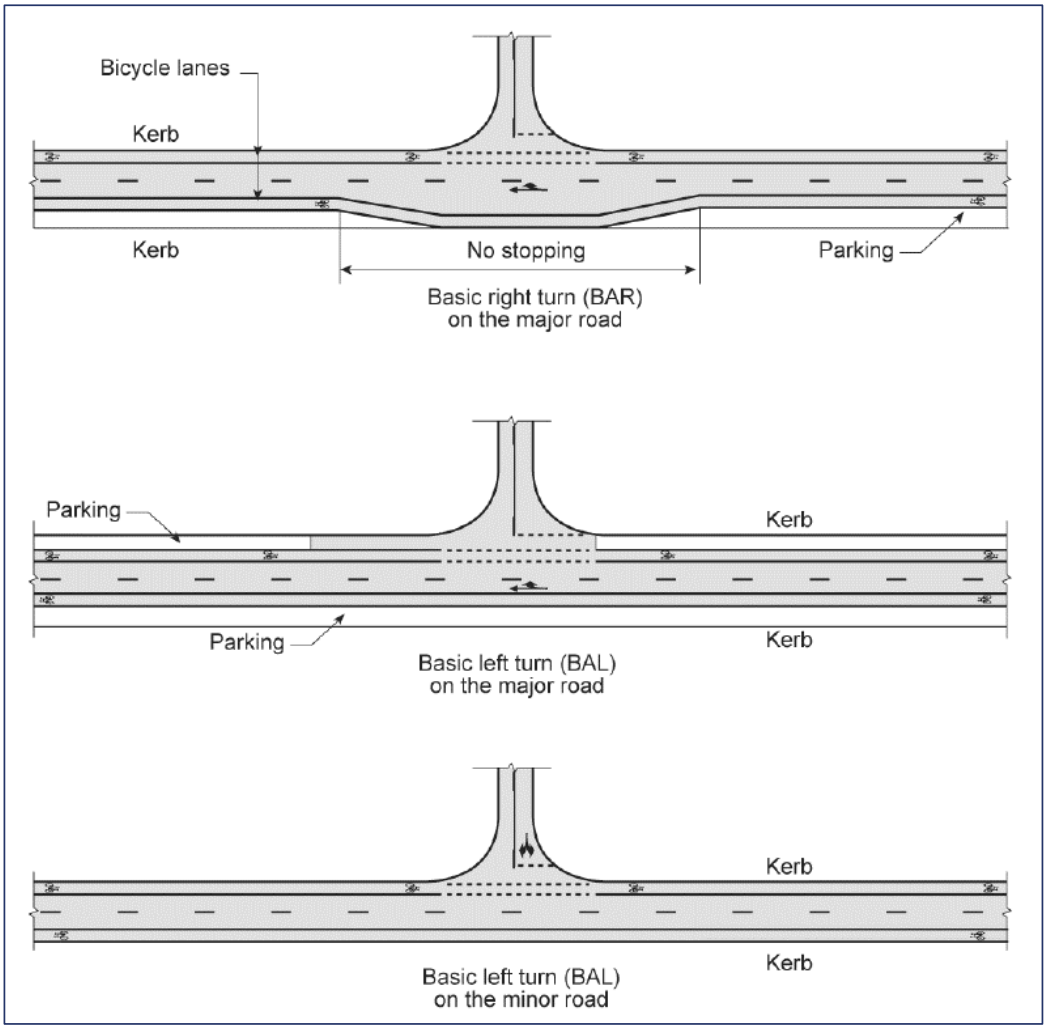
Source: Austroads GTM Part 6

With reference to Figure 15, the Intersection of Cargo Road & Road 1 would require:

- A BAL turn treatment for the left turn from Cargo Road to Road 1;
- A Basic Right (**BAR**) turn treatment for the right turn from Cargo Road to Road 1; and
- A BAL turn treatment for the left turn from Road 1 to Cargo Road.

The general design of these treatments is shown in Figure A.2 of Austroads GRD Part 4, which is reproduced below.

Figure 16: Austroads Basic Turn Treatments



Source: Austroads GRD Part 4

It is noted that these treatment designs are essentially the same as those provided at intersections of other local roads with Cargo Road, including Yackerboon Place, Ploughmans Lane and Kooranga Avenue.

With regard to the design of the intersection, the TfNSW RFI states the following:

> *…if you put all traffic onto Road 1, the development would be at the tipping scale of a full length CHR and AUL. Given access to Witton Place is provided, an AUL(s) and CHR(s) would suffice. I note the plan provided showed an AUL(s)/AUR type intersection. Austroads and TfNSW no longer support AURs which have been replaced by CHR(s).*

Given the low volumes of right turn traffic performing this movement (as previously noted and provided in the TIA), my view is that a BAR would suffice for this intersection, but would be happy to support Council, should they wish, to require a CHR(s) at this location to be consistent with the existing road environment (Witton has a CHR(s)).

While TfNSW agrees that a BAR treatment is appropriate, it is noted again that the Austroads GRD Part 4 warrants show that either Site trips to the intersection or traffic volumes in Cargo Road would still need relatively significant increases to reach the Channelised Right (**CHR**) treatment using the distribution profile recommended in the TfNSW RFI.

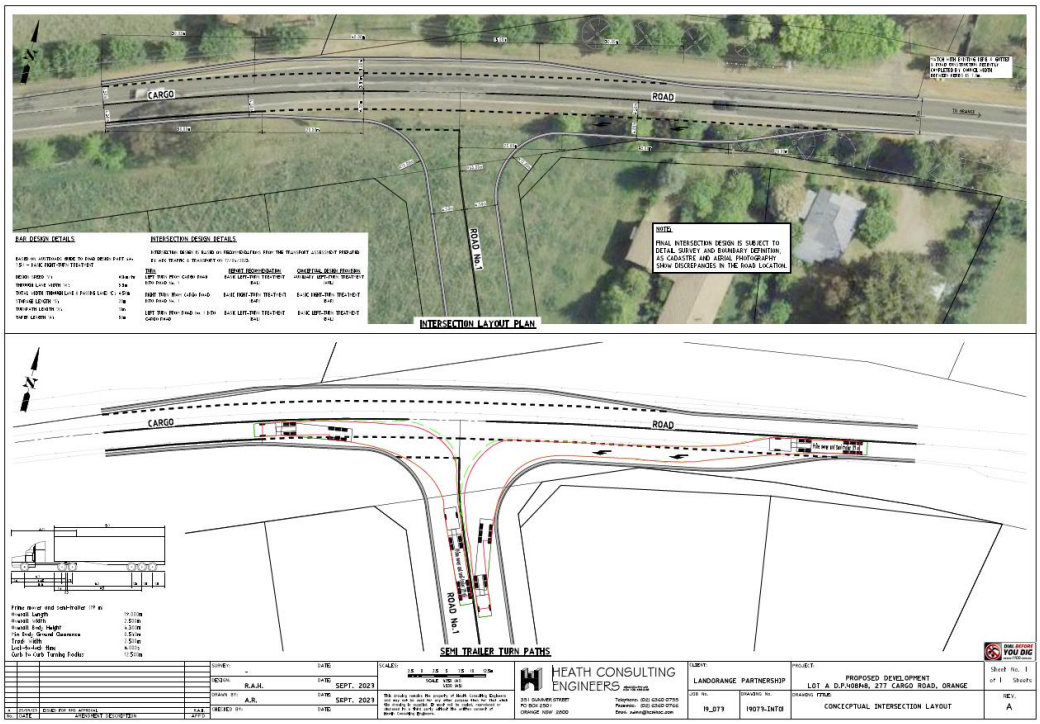
Moreover, TfNSW's identification of future traffic volumes being at the tipping scale for a CHR is only based on an assignment of all trips to the intersection of Cargo Road & Road 1, which will simply not occur given the more efficient route via Road 2, Witton Place and the intersection of Cargo Road & Witton Road for a significant number of dwellings in the central and southern part of the WPCA.

As such, arc traffic + transport would agree with TfNSW that the provision of a BAR treatment for the movement Cargo Roaf to Road 1 is appropriate.

5.7.2 Intersection Design

Further to a determination of BAL and BAR treatments as being warranted, a detailed design of the intersection has been prepared by Heath Consulting Engineers, and is shown below, noting that plans will also be submitted to Council and TfNSW for full approval prior to construction.

Figure 17: Cargo Road & Road 1 Concept Design



Source: Heath Consulting Engineers

5.7.3 Sight Distance

Sight distance requirement can be determined with reference to Section 5 of the GRD Part 3, which provides details of required sight distance under different road conditions and different vehicle speeds. As noted in the TfNSW RFI, it is preferable for new intersections to not only provide Safe Stopping Distance (**SSD**) but the higher order Safe Intersection Sight Distance (**SISD**), which requires additional sight distance to provide greater awareness of turning vehicles prior to a potential conflict point.

In regard to Road 1, the TfNSW RFI notes that SISD of 151m would be required in both directions for a design speed limit of 70km/h, notwithstanding minor revision to account for grade changes. It is also noted that the current speed limit in Cargo Road is 60km/h (i.e. 10km/h lower than the design speed) and moreover that Council have indicated a likely reduction in the Cargo Road speed limit to 50km/h past the Site and other new residential developments in Cargo Road.

As such, 151m will more likely represent a SISD requirement for a speed 20km/h higher than the future posted speed limit.

Regardless, an assessment of the available sight distance was undertaken by Heath Consulting Engineers in November 2023 based on the sight distance assessment guidelines identified in Section 5 of GRD Part 3, which determined that SISD of at least 151m was available to both the east and west of Road 1.

A copy of the Heath Consulting Engineers sight distance assessment is provided in Appendix C, and we note that the Council RFI confirms the findings of the assessment.

5.8 Future WPCA Intersections

5.8.1 Intersection of Cargo Road & Witton Place

As discussed in Section 4.2.1, the intersection of Cargo Road & Witton Place already provides significantly auxiliary turn treatments; this existing intersection design has been used in the first instance for the assessment of the intersection (SIDRA) under all future scenarios, noting that the additional traffic volumes at the intersection do not (in and of themselves) warrant higher order treatments than those currently provided.

5.8.2 Intersection of Witton Place & Taloumbi Place & WPCA

As discussed in Section 5.2.3, the Housing Strategy indicates that future access from the WPCA could be provided via Witton Place further to a new road connecting to Witton Place opposite or south of Taloumbi Place. In the first instance – and as a worst case - the assessment of this intersection using SIDRA considers a 4 way intersection of Witton Place & Taloumbi Place & Road 2 operating under priority (Give Way) control, with priority to Witton Place.

5.9 Future Traffic Operations

5.9.1 Intersection Operations: Base 2033 + Site

SIDRA has been utilised to determine the future operation of the key intersections further to the additional Site trips, referencing the future traffic volumes detailed in Section 5.6.1, and the intersection designs detailed in Section 5.7.

Further to the SIDRA analysis, Table 8 provides a summary of the resulting future intersection operations under the Base 2033 + Site scenario (noting that traffic volumes at the intersection of Witton Place & Taloumbi Place would not change). SIDRA Movement Summary reports are again provided in Appendix B.

Table 8: Base 2033 + Site Intersection Operations

Base 2033 + Site	Level of Service		Average Delay (s)		Worst Delay (s)		Degree of Saturation	
	AM	PM	AM	PM	AM	PM	AM	PM
Cargo Road & Witton Place	A	A	0.5	0.6	9.8	8.5	0.186	0.153
Cargo Road & Road 1	A	A	0.7	0.6	6.7	6.4	0.149	0.155

With reference to Table 8, the key intersections will operate at a Level of Service A in both peak periods further to the development of the Site in accordance with the Proposal.

5.9.2 Intersection Operations: Base 2033 + Site + WPCA

SIDRA has been utilised to determine the future operation of the key intersections further to the additional Site and WPCA trips, referencing the future traffic volumes detailed in Section 0, and the intersection designs detailed in Section 5.7. Analysis is provided of each of Assignment 1, Assignment 2 and Assignment 3 in Table 9, Table 10 and Table 11 respectively, and SIDRA Movement Summary reports are provided in Appendix B.

Table 9: Base 2033 + Site + WPCA Intersection Operations Assignment 1

Base 2033 + Site	Level of Service		Average Delay (s)		Worst Delay (s)		Degree of Saturation	
	AM	PM	AM	PM	AM	PM	AM	PM
Cargo Road & Witton Place	A	A	1.5	1.3	10.0	9.4	0.166	0.169
Cargo Road & Road 1	A	A	0.7	0.7	7.1	6.6	0.173	0.172
Witton Place & Taloumbi Place	A	A	4.4	4.5	4.9	4.9	0.033	0.040

Table 10: Base 2033 + Site + WPCA Intersection Operations Assignment 2

Base 2033 + Site	Level of Service		Average Delay (s)		Worst Delay (s)		Degree of Saturation	
	AM	PM	AM	PM	AM	PM	AM	PM
Cargo Road & Witton Place	A	A	1.0	1.0	7.2	9.5	0.172	0.178
Cargo Road & Road 1	A	A	1.0	0.9	6.9	6.7	0.158	0.180
Witton Place & Taloumbi Place	A	A	4.4	4.4	4.7	4.8	0.023	0.031

Table 11: Base 2033 + Site + WPCA Intersection Operations Assignment 3

Base 2033 + Site	Level of Service		Average Delay (s)		Worst Delay (s)		Degree of Saturation	
	AM	PM	AM	PM	AM	PM	AM	PM
Cargo Road & Witton Place	A	A	1.0	0.9	10.8	9.1	0.200	0.165
Cargo Road & Road 1	A	A	1.1	1.1	7.1	6.5	0.172	0.167
Witton Place & Taloumbi Place	A	A	4.3	4.4	4.6	4.8	0.020	0.027

With reference to the tables above, the key intersections will operate at a Level of Service A in both peak periods under each of the different assignments, and with reference to the SIDRA Movement reports provided in Appendix B, there is virtually no queuing on any approaches to these intersections, and significant spare capacity in all approaches.

As such, the intersection design of both Cargo Road & Road 1, and Witton Place & Taloumbi Place & Road 2 as discussed in Section 5.2.2 and Section 5.2.3 respectively, will more than appropriately provide for future traffic conditions.

5.9.3 Environmental Capacity

With regard to environmental capacity, Witton Place and Taloumbi Place will continue to accommodate traffic volumes significantly lower than the environmental cap for a *Local Street*, as will all roads within the Site and WPCA (see also Section 5.10).

5.10 Internal Roads

Within the Site, the proposed road network is based on the design profiles provided in the Subdivision Code appropriate to the internal hierarchy of roads within residential estates. In this regard, Table 2.1 of the Subdivision Code provides guidance on the determination of different road classes, as summarised in Table 12.

Table 12: Road Classification

Classification	Dwellings Served	Frontage Access	Design Speed
Urban Distributor	> 200	No	60km/h - 80km/h
Urban Collector	200	Yes	60km/h - 80km/h
Urban Local Access	50	Yes	50km/h
Urban Cul-de-Sac	> 8	Yes	40km/h
Urban Cul-de-Sac	< 8	Yes	40km/h

Source: Subdivision Code

Further to a determination of the class of road, Table 2.3.4.1 of the Subdivision Code provides the standard road profile for each class, as summarised in Table 13.

Table 13: Subdivision Code Road Profiles

Class of Road	Reserve (m)	Verge (m)	Carriageway (m)	Footpath (m)
Urban Distributor	22.0	2 x 4.5	13.0	2 x 1.5
Urban Collector	20.0	2 x 4.5	11.0	2 x 1.2
Urban Local Access	18.0	2 x 4.5	9.0	2 x 1.2
Urban Cul-de-Sac	18.0	2 x 4.5	9.0	1 x 1.2

Source: Subdivision Code

Based on the traffic volumes generated within the Site, it is anticipated that one of the north-south roads through the WPCA would be designed to the Urban Collector profile, while all other roads would provide access for fewer than 50 dwellings, and as such could be designed to the Urban Local Access or Urban Cul-de-Sac profiles.

As discussed in regard to the TfNSW RFI, only one new access road to Cargo Road (Road 1) is proposed.

The design of all roads will be determined as part of a future Development Application, and will also be subject to a swept path analysis to ensure that a waste collection vehicle can appropriately navigate all internal and interface intersections. Notwithstanding, it is generally the case that adherence to the Subdivision Code means that intersections can appropriately provide for such vehicles by default.

6 Conclusions

Further to our assessment of the Proposal, arc traffic + transport has determined the following:

- The Proposal is in accordance with the Housing Strategy, which specifically identifies the Site and WPCA for short-term low density residential development.
- Access to the Site will be provided via Cargo Road directly in accordance with the Housing Strategy; while it is anticipated that road connections to both Witton Place and Bowman Avenue will be provided further to the full development of the WPCA, the Site does not rely on these future connections, as all access can be provided via Cargo Road.
- With specific reference to the TfNSW RFI, only a single new connection is proposed between the Site/WPCA and Cargo Road at Road 1.
- In accordance with the Housing Strategy, no vehicle access will be provided between the WPCA and Neals Lane.
- There is good potential for local bus services to extend out to new residential areas in the short term, and a potential bus route running north-south through the Site and WPCA would provide access to bus stops within 400m of all dwellings.
- Active transport infrastructure will be provided within the Site based on the Subdivision Code road profile requirements, and a shared path will be provided along the Site frontage to Cargo Road, linking to the recently constructed shared path to the east of Witton Place.
- Under future Base 2033 conditions, the road network continues to operate at good Level of Service simply as a function of what are relatively moderate traffic volumes, particularly in Cargo Road.
- Further to the introduction of the additional Site trips, the local road network continues to operate at a good Level of Service, with minimal delays and queues at key intersections that also retain significant spare capacity; this is the case based on each of the different distribution assignments.
- Under both distribution profiles, the intersection of Cargo Road & Road 1 meets the warrants for the provision of BAL and BAR treatments only, and as noted in the TfNSW RFI these are considered to be appropriate treatments, particularly given the additional access available via the Cargo Road & Witton Place intersection.
- Sight distance at the intersection of Cargo Road & Road 1 has been assessed by Heath Consulting Engineers, and found to meet Austroads requirements for a 70km/h design speed in Cargo Road. It is anticipated that Council will in the future reduced the speed limit in Cargo Road past the Site which means that the sight distance requirements at Road 1 will be exceeded.
- Total traffic volumes in all local roads remain well below their environmental caps.

- All internal roads will be constructed in accordance with the Subdivision Code's road profile requirements, and swept path analysis of the largest vehicle travelling through internal intersections will be undertaken as part of future DAs.

In summary, arc traffic + transport has determined that the Planning Proposal is fully supportable further to access, traffic and transport considerations.

Appendix A: Traffic Surveys

Cargo Road & Witton Place 2023 Hourly Traffic Volumes

Location	-	Duration	7:00 - 9:00
	Cargo Road		16:00 - 18:00
	Witton Place		
	Cargo Road	Day/Date	Wednesday, 8 March 2023
Suburb	ORANGE	Weather	-

All Vehicles Time Per Hour	NORTH -										EAST Cargo Road										TOTAL	TOTAL		TOTAL
	L			T			R				L			T			R							
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	
7:00 - 8:00											7	0	7	90	11	101				108	249	12	261
7:15 - 8:15											7	1	8	94	16	110				118	281	18	299
7:30 - 8:30											6	1	7	99	17	116				123	336	23	359
7:45 - 8:45											7	1	8	117	15	132				140	396	22	418
8:00 - 9:00											6	1	7	147	15	162				169	432	23	455
Period End																							
16:00 - 17:00											17	2	19	161	3	164				183	360	12	372
16:15 - 17:15											16	2	18	159	5	164				182	327	16	343
16:30 - 17:30											19	1	20	180	6	186				206	333	14	347
16:45 - 17:45											25	0	25	196	6	202				227	350	14	364
17:00 - 18:00											22	1	23	205	7	212				235	364	18	382
Period End																							

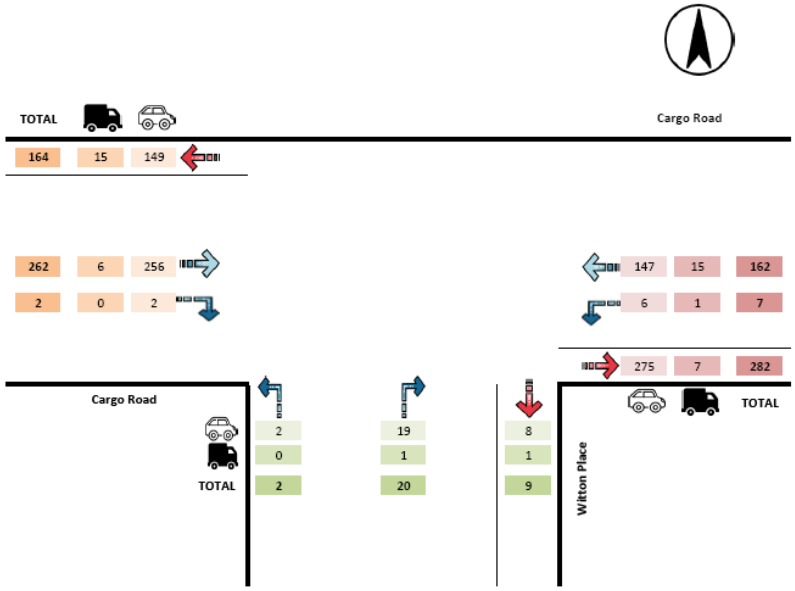
All Vehicles Time Per Hour	SOUTH Witton Place										WEST Cargo Road										TOTAL	TOTAL		TOTAL
	L			T			R				L			T			R							
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	
7:00 - 8:00	2	0	2				14	1	15	17				136	0	136	0	0	0	136	249	12	261
7:15 - 8:15	1	0	1				13	1	14	15				166	0	166	0	0	0	166	281	18	299
7:30 - 8:30	1	0	1				16	1	17	18				214	4	218	0	0	0	218	336	23	359
7:45 - 8:45	3	0	3				19	1	20	23				248	5	253	2	0	2	255	396	22	418
8:00 - 9:00	2	0	2				19	1	20	22				256	6	262	2	0	2	264	432	23	455
Period End																							
16:00 - 17:00	0	0	0				9	0	9	9				169	6	175	4	1	5	180	360	12	372
16:15 - 17:15	0	0	0				13	0	13	13				135	9	144	4	0	4	148	327	16	343
16:30 - 17:30	1	0	1				14	0	14	15				117	7	124	2	0	2	126	333	14	347
16:45 - 17:45	2	0	2				12	0	12	14				114	8	122	1	0	1	123	350	14	364
17:00 - 18:00	3	0	3				13	0	13	16				120	10	130	1	0	1	131	364	18	382
Period End																							

Cargo Road & Witton Place 2023 AM Peak Hour Volumes

Location	-	Duration	7:00 - 9:00
	Cargo Road		16:00 - 18:00
	Witton Place		-
	Cargo Road	Day/Date	Wednesday, 8 March 2023
Suburb	ORANGE	Weather	-

DATA SELECTION	
Select Time:	PEAK

TIME RANGE		
PEAK	-	AM
PEAK		
8:00	-	9:00

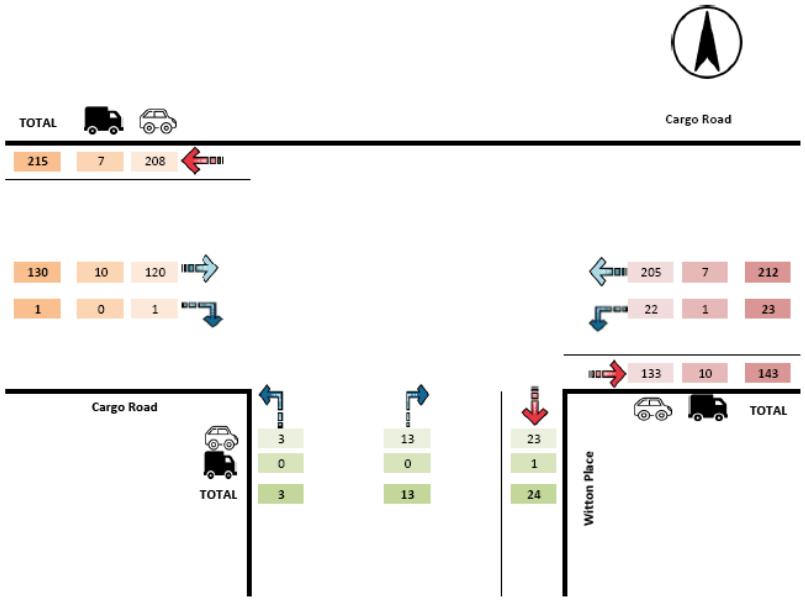


Cargo Road & Witton Place 2023 PM Peak Hour Volumes

Location	-	Duration	7:00 - 9:00
	Cargo Road		16:00 - 18:00
	Witton Place		-
	Cargo Road	Day/Date	Wednesday, 8 March 2023
Suburb	ORANGE	Weather	-

DATA SELECTION	
Select Time:	PEAK

TIME RANGE		
PEAK	-	PM
PEAK		
17:00	-	18:00



Appendix B: SIDRA Movement Reports

2023 AM Peak Hour Cargo Road & Witton Place

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo Road & Witton Place 2023 AM Peak (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	2	1.0	2	1.0	0.038	5.2	LOS A	0.1	1.0	0.48	0.66	0.48	47.5
3	R2	20	1.0	21	1.0	0.038	8.3	LOS A	0.1	1.0	0.48	0.66	0.48	47.4
Approach		22	1.0	23	1.0	0.038	8.0	LOS A	0.1	1.0	0.48	0.66	0.48	47.4
East: Cargo Road														
4	L2	7	1.0	7	1.0	0.004	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	162	5.0	171	5.0	0.090	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		169	4.8	178	4.8	0.090	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.7
West: Cargo Road														
11	T1	262	5.0	276	5.0	0.146	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	2	1.0	2	1.0	0.002	6.1	LOS A	0.0	0.0	0.28	0.54	0.28	48.8
Approach		264	5.0	278	5.0	0.146	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles		455	4.7	479	4.7	0.146	0.5	NA	0.1	1.0	0.02	0.04	0.02	59.0

2023 PM Peak Hour Cargo Road & Witton Place

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo Road & Witton Place 2023 PM Peak (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	3	1.0	3	1.0	0.024	5.5	LOS A	0.1	0.6	0.43	0.60	0.43	48.2
3	R2	13	1.0	14	1.0	0.024	7.4	LOS A	0.1	0.6	0.43	0.60	0.43	48.0
Approach		16	1.0	17	1.0	0.024	7.0	LOS A	0.1	0.6	0.43	0.60	0.43	48.0
East: Cargo Road														
4	L2	23	1.0	24	1.0	0.013	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	212	5.0	223	5.0	0.118	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		235	4.6	247	4.6	0.118	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.3
West: Cargo Road														
11	T1	130	5.0	137	5.0	0.072	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	1	1.0	1	1.0	0.001	6.4	LOS A	0.0	0.0	0.33	0.54	0.33	48.7
Approach		131	5.0	138	5.0	0.072	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		382	4.6	402	4.6	0.118	0.7	NA	0.1	0.6	0.02	0.06	0.02	58.9

2023 AM Peak Hour Witton Place & Taloumbi Place

MOVEMENT SUMMARY

▽ **Site: 2 [Witton Place & Taloumbi Place 2023 AM Peak (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
2	T1	3	0.0	3	0.0	0.002	0.0	LOS A	0.0	0.0	0.03	0.14	0.03	49.2
3	R2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.03	0.14	0.03	48.2
Approach		4	0.0	4	0.0	0.002	1.2	NA	0.0	0.0	0.03	0.14	0.03	48.9
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.54	0.03	46.6
6	R2	19	1.0	20	1.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.54	0.03	46.1
Approach		20	1.0	21	1.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.54	0.03	46.1
North: Witton Place														
7	L2	8	1.0	8	1.0	0.005	4.6	LOS A	0.0	0.0	0.00	0.47	0.00	46.9
8	T1	1	0.0	1	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.47	0.00	47.4
Approach		9	0.9	9	0.9	0.005	4.1	NA	0.0	0.0	0.00	0.47	0.00	47.0
All Vehicles		33	0.8	35	0.8	0.016	4.0	NA	0.1	0.4	0.02	0.48	0.02	46.7

2023 PM Peak Hour Witton Place & Taloumbi Place

MOVEMENT SUMMARY

▽ **Site: 2 [Witton Place & Taloumbi Place 2023 PM Peak (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
2	T1	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.08	0.27	0.08	48.3
3	R2	1	0.0	1	0.0	0.001	4.6	LOS A	0.0	0.0	0.08	0.27	0.08	47.4
Approach		2	0.0	2	0.0	0.001	2.3	NA	0.0	0.0	0.08	0.27	0.08	47.8
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.3	0.04	0.54	0.04	46.5
6	R2	15	1.0	16	1.0	0.013	4.6	LOS A	0.0	0.3	0.04	0.54	0.04	46.1
Approach		16	0.9	17	0.9	0.013	4.6	LOS A	0.0	0.3	0.04	0.54	0.04	46.1
North: Witton Place														
7	L2	22	1.0	23	1.0	0.014	4.6	LOS A	0.0	0.0	0.00	0.49	0.00	46.8
8	T1	2	0.0	2	0.0	0.014	0.0	LOS A	0.0	0.0	0.00	0.49	0.00	47.3
Approach		24	0.9	25	0.9	0.014	4.2	NA	0.0	0.0	0.00	0.49	0.00	46.9
All Vehicles		42	0.9	44	0.9	0.014	4.3	NA	0.0	0.3	0.02	0.50	0.02	46.6

Base 2033 AM Peak Hour Cargo Road & Witton Place

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo Road & Witton Place Base 2033 AM Peak (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	2	1.0	2	1.0	0.038	5.2	LOS A	0.1	1.0	0.48	0.66	0.48	47.5
3	R2	20	1.0	21	1.0	0.038	8.3	LOS A	0.1	1.0	0.48	0.66	0.48	47.4
Approach		22	1.0	23	1.0	0.038	8.0	LOS A	0.1	1.0	0.48	0.66	0.48	47.4
East: Cargo Road														
4	L2	7	1.0	7	1.0	0.004	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	162	5.0	171	5.0	0.090	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		169	4.8	178	4.8	0.090	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.7
West: Cargo Road														
11	T1	262	5.0	276	5.0	0.146	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	2	1.0	2	1.0	0.002	6.1	LOS A	0.0	0.0	0.28	0.54	0.28	48.8
Approach		264	5.0	278	5.0	0.146	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles		455	4.7	479	4.7	0.146	0.5	NA	0.1	1.0	0.02	0.04	0.02	59.0

Base 2033 PM Peak Hour Cargo Road & Witton Place

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo Road & Witton Place Base 2033 PM Peak (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	3	1.0	3	1.0	0.024	5.5	LOS A	0.1	0.6	0.43	0.60	0.43	48.2
3	R2	13	1.0	14	1.0	0.024	7.4	LOS A	0.1	0.6	0.43	0.60	0.43	48.0
Approach		16	1.0	17	1.0	0.024	7.0	LOS A	0.1	0.6	0.43	0.60	0.43	48.0
East: Cargo Road														
4	L2	23	1.0	24	1.0	0.013	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	212	5.0	223	5.0	0.118	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		235	4.6	247	4.6	0.118	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.3
West: Cargo Road														
11	T1	130	5.0	137	5.0	0.072	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	1	1.0	1	1.0	0.001	6.4	LOS A	0.0	0.0	0.33	0.54	0.33	48.7
Approach		131	5.0	138	5.0	0.072	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		382	4.6	402	4.6	0.118	0.7	NA	0.1	0.6	0.02	0.06	0.02	58.9

Base 2033 + Site AM Peak Hour Cargo Road & Witton Place

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo Road & Witton Place Base 2033 AM Peak + Site (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	2	1.0	2	1.0	0.045	5.4	LOS A	0.2	1.1	0.54	0.71	0.54	46.7
3	R2	20	1.0	21	1.0	0.045	9.8	LOS A	0.2	1.1	0.54	0.71	0.54	46.5
Approach		22	1.0	23	1.0	0.045	9.4	LOS A	0.2	1.1	0.54	0.71	0.54	46.5
East: Cargo Road														
4	L2	7	1.0	7	1.0	0.004	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	200	5.0	211	5.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		207	4.9	218	4.9	0.111	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.7
West: Cargo Road														
11	T1	334	5.0	352	5.0	0.186	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	2	1.0	2	1.0	0.002	6.3	LOS A	0.0	0.0	0.31	0.54	0.31	48.7
Approach		336	5.0	354	5.0	0.186	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles		565	4.8	595	4.8	0.186	0.5	NA	0.2	1.1	0.02	0.04	0.02	59.1

Base 2033 + Site PM Peak Hour Cargo Road & Witton Place

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo Road & Witton Place Base 2033 PM Peak + Site (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	3	1.0	3	1.0	0.027	5.8	LOS A	0.1	0.7	0.49	0.65	0.49	47.6
3	R2	13	1.0	14	1.0	0.027	8.5	LOS A	0.1	0.7	0.49	0.65	0.49	47.4
Approach		16	1.0	17	1.0	0.027	8.0	LOS A	0.1	0.7	0.49	0.65	0.49	47.4
East: Cargo Road														
4	L2	23	1.0	24	1.0	0.013	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	274	5.0	288	5.0	0.153	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		297	4.7	313	4.7	0.153	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.4
West: Cargo Road														
11	T1	162	5.0	171	5.0	0.090	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	1	1.0	1	1.0	0.001	6.7	LOS A	0.0	0.0	0.38	0.55	0.38	48.6
Approach		163	5.0	172	5.0	0.090	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		476	4.7	501	4.7	0.153	0.6	NA	0.1	0.7	0.02	0.05	0.02	59.0

Base 2033 + Site AM Peak Hour Cargo Road & Road 1

MOVEMENT SUMMARY

▽ Site: [Cargo Road & Road 1 Base 2033 AM Peak + Site (Site Folder: General)]

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	6	1.0	6	1.0	0.048	5.2	LOS A	0.2	1.1	0.39	0.64	0.39	45.5
3	R2	33	1.0	35	1.0	0.048	6.7	LOS A	0.2	1.1	0.39	0.64	0.39	45.1
Approach		39	1.0	41	1.0	0.048	6.5	LOS A	0.2	1.1	0.39	0.64	0.39	45.1
East: Cargo Road														
4	L2	14	1.0	15	1.0	0.113	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	49.2
5	T1	188	5.0	198	5.0	0.113	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.7
Approach		202	4.7	213	4.7	0.113	0.3	NA	0.0	0.0	0.00	0.04	0.00	49.7
West: Cargo Road														
11	T1	264	5.0	278	5.0	0.149	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	49.9
12	R2	3	1.0	3	1.0	0.149	5.4	LOS A	0.0	0.2	0.01	0.01	0.01	48.9
Approach		267	5.0	281	5.0	0.149	0.1	NA	0.0	0.2	0.01	0.01	0.01	49.9
All Vehicles		508	4.6	535	4.6	0.149	0.7	NA	0.2	1.1	0.04	0.07	0.04	49.4

Base 2033 + Site PM Peak Hour Cargo Road & Road 1

MOVEMENT SUMMARY

▽ Site: [Cargo Road & Road 1 Base 2033 PM Peak + Site (Site Folder: General)]

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	2	1.0	2	1.0	0.018	5.4	LOS A	0.1	0.4	0.39	0.61	0.39	45.6
3	R2	13	1.0	14	1.0	0.018	6.4	LOS A	0.1	0.4	0.39	0.61	0.39	45.2
Approach		15	1.0	16	1.0	0.018	6.2	LOS A	0.1	0.4	0.39	0.61	0.39	45.3
East: Cargo Road														
4	L2	30	1.0	32	1.0	0.155	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	49.1
5	T1	247	5.0	260	5.0	0.155	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	49.6
Approach		277	4.6	292	4.6	0.155	0.5	NA	0.0	0.0	0.00	0.06	0.00	49.5
West: Cargo Road														
11	T1	150	5.0	158	5.0	0.088	0.1	LOS A	0.0	0.3	0.03	0.02	0.03	49.8
12	R2	5	1.0	5	1.0	0.088	5.6	LOS A	0.0	0.3	0.03	0.02	0.03	48.8
Approach		155	4.9	163	4.9	0.088	0.2	NA	0.0	0.3	0.03	0.02	0.03	49.8
All Vehicles		447	4.6	471	4.6	0.155	0.6	NA	0.1	0.4	0.02	0.06	0.02	49.5

Base 2033 + Site +WPCA AM Cargo Road & Witton Place Assignment 1

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo & Witton Base 2033 AM Peak + WPCA Assignment 1 (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	2	1.0	2	1.0	0.146	5.6	LOS A	0.6	3.9	0.58	0.80	0.58	46.4
3	R2	69	1.0	73	1.0	0.146	10.0	LOS A	0.6	3.9	0.58	0.80	0.58	46.2
Approach		71	1.0	75	1.0	0.146	9.9	LOS A	0.6	3.9	0.58	0.80	0.58	46.2
East: Cargo Road														
4	L2	28	1.0	29	1.0	0.016	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	215	5.0	226	5.0	0.120	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		243	4.5	256	4.5	0.120	0.7	NA	0.0	0.0	0.00	0.07	0.00	59.1
West: Cargo Road														
11	T1	297	5.0	313	5.0	0.166	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	2	1.0	2	1.0	0.002	6.4	LOS A	0.0	0.1	0.34	0.55	0.34	48.6
Approach		299	5.0	315	5.0	0.166	0.1	NA	0.0	0.1	0.00	0.00	0.00	59.8
All Vehicles		613	4.3	645	4.3	0.166	1.5	NA	0.6	3.9	0.07	0.12	0.07	57.6

Base 2033 + Site +WPCA PM Cargo Road & Witton Place Assignment 1

MOVEMENT SUMMARY

▽ **Site: 1 [Cargo & Witton Base 2033 PM Peak + WPCA Assignment 1 (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	3	1.0	3	1.0	0.068	6.0	LOS A	0.2	1.7	0.54	0.73	0.54	46.9
3	R2	32	1.0	34	1.0	0.068	9.4	LOS A	0.2	1.7	0.54	0.73	0.54	46.7
Approach		35	1.0	37	1.0	0.068	9.1	LOS A	0.2	1.7	0.54	0.73	0.54	46.7
East: Cargo Road														
4	L2	68	1.0	72	1.0	0.039	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	304	5.0	320	5.0	0.169	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		372	4.3	392	4.3	0.169	1.1	NA	0.0	0.0	0.00	0.11	0.00	58.6
West: Cargo Road														
11	T1	163	5.0	172	5.0	0.091	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	1	1.0	1	1.0	0.001	7.1	LOS A	0.0	0.0	0.43	0.56	0.43	48.4
Approach		164	5.0	173	5.0	0.091	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		571	4.3	601	4.3	0.169	1.3	NA	0.2	1.7	0.03	0.11	0.03	58.1

Base 2033 + Site +WPCA AM Cargo Road & Road 1 Assignment 1

MOVEMENT SUMMARY

Site: [Cargo Road & Road 1 Base 2033 AM Peak + WPCA Assignment 1 (Site Folder: General)]

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	14	1.0	15	1.0	0.057	5.3	LOS A	0.2	1.4	0.39	0.63	0.39	45.5
3	R2	33	1.0	35	1.0	0.057	7.1	LOS A	0.2	1.4	0.39	0.63	0.39	45.0
Approach		47	1.0	49	1.0	0.057	6.6	LOS A	0.2	1.4	0.39	0.63	0.39	45.2
East: Cargo Road														
4	L2	14	1.0	15	1.0	0.121	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	49.2
5	T1	202	5.0	213	5.0	0.121	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.7
Approach		216	4.7	227	4.7	0.121	0.3	NA	0.0	0.0	0.00	0.04	0.00	49.7
West: Cargo Road														
11	T1	303	5.0	319	5.0	0.173	0.0	LOS A	0.1	0.4	0.02	0.01	0.02	49.9
12	R2	6	1.0	6	1.0	0.173	5.5	LOS A	0.1	0.4	0.02	0.01	0.02	48.9
Approach		309	4.9	325	4.9	0.173	0.1	NA	0.1	0.4	0.02	0.01	0.02	49.9
All Vehicles		572	4.5	602	4.5	0.173	0.7	NA	0.2	1.4	0.04	0.07	0.04	49.4

Base 2033 + Site +WPCA PM Cargo Road & Road 1 Assignment 1

MOVEMENT SUMMARY

Site: [Cargo Road & Road 1 Base 2033 PM Peak + WPCA Assignment 1 (Site Folder: General)]

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	6	1.0	6	1.0	0.022	5.5	LOS A	0.1	0.5	0.39	0.60	0.39	45.6
3	R2	13	1.0	14	1.0	0.022	6.6	LOS A	0.1	0.5	0.39	0.60	0.39	45.2
Approach		19	1.0	20	1.0	0.022	6.2	LOS A	0.1	0.5	0.39	0.60	0.39	45.4
East: Cargo Road														
4	L2	30	1.0	32	1.0	0.172	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	49.1
5	T1	277	5.0	292	5.0	0.172	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
Approach		307	4.6	323	4.6	0.172	0.5	NA	0.0	0.0	0.00	0.05	0.00	49.6
West: Cargo Road														
11	T1	150	5.0	158	5.0	0.089	0.1	LOS A	0.1	0.4	0.04	0.02	0.04	49.8
12	R2	6	1.0	6	1.0	0.089	5.8	LOS A	0.1	0.4	0.04	0.02	0.04	48.8
Approach		156	4.8	164	4.8	0.089	0.3	NA	0.1	0.4	0.04	0.02	0.04	49.7
All Vehicles		482	4.5	507	4.5	0.172	0.7	NA	0.1	0.5	0.03	0.06	0.03	49.4

Base 2033 + Site +WPCA AM Witton Place & Taloumbi Place & Road 2 Assignment 1

MOVEMENT SUMMARY

▽ **Site: 2 [Witton & Taloumbi & Road 2 2033 AM Peak + WPCA Assignment 1 (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	1	0.0	1	0.0	0.003	4.6	LOS A	0.0	0.0	0.02	0.22	0.02	48.2
2	T1	3	0.0	3	0.0	0.003	0.0	LOS A	0.0	0.0	0.02	0.22	0.02	48.7
3	R2	1	0.0	1	0.0	0.003	4.6	LOS A	0.0	0.0	0.02	0.22	0.02	47.8
Approach		5	0.0	5	0.0	0.003	1.8	NA	0.0	0.0	0.02	0.22	0.02	48.4
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.021	4.6	LOS A	0.1	0.5	0.04	0.55	0.04	46.5
5	T1	1	0.0	1	0.0	0.021	3.3	LOS A	0.1	0.5	0.04	0.55	0.04	46.5
6	R2	19	1.0	20	1.0	0.021	4.9	LOS A	0.1	0.5	0.04	0.55	0.04	46.0
Approach		21	0.9	22	0.9	0.021	4.8	LOS A	0.1	0.5	0.04	0.55	0.04	46.1
North: Witton Place														
7	L2	8	1.0	8	1.0	0.017	4.6	LOS A	0.1	0.5	0.03	0.52	0.03	46.6
8	T1	1	0.0	1	0.0	0.017	0.0	LOS A	0.1	0.5	0.03	0.52	0.03	47.1
9	R2	21	0.0	22	0.0	0.017	4.6	LOS A	0.1	0.5	0.03	0.52	0.03	46.2
Approach		30	0.3	32	0.3	0.017	4.4	NA	0.1	0.5	0.03	0.52	0.03	46.4
West: Road 2														
10	L2	49	0.0	52	0.0	0.033	4.6	LOS A	0.1	0.9	0.02	0.52	0.02	46.6
11	T1	1	0.0	1	0.0	0.033	3.3	LOS A	0.1	0.9	0.02	0.52	0.02	46.7
12	R2	1	0.0	1	0.0	0.033	4.7	LOS A	0.1	0.9	0.02	0.52	0.02	46.2
Approach		51	0.0	54	0.0	0.033	4.5	LOS A	0.1	0.9	0.02	0.52	0.02	46.6
All Vehicles		107	0.3	113	0.3	0.033	4.4	NA	0.1	0.9	0.03	0.51	0.03	46.5

Base 2033 + Site +WPCA PM Witton Place & Taloumbi Place & Road 2 Assignment 1

MOVEMENT SUMMARY

▽ **Site: 2 [Witton & Taloumbi & Road 2 2033 PM Peak + WPCA Assignment 1 (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.07	0.35	0.07	47.4
2	T1	1	0.0	1	0.0	0.002	0.0	LOS A	0.0	0.0	0.07	0.35	0.07	47.8
3	R2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.07	0.35	0.07	46.9
Approach		3	0.0	3	0.0	0.002	3.1	NA	0.0	0.0	0.07	0.35	0.07	47.4
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.017	4.6	LOS A	0.1	0.4	0.06	0.54	0.06	46.5
5	T1	1	0.0	1	0.0	0.017	3.4	LOS A	0.1	0.4	0.06	0.54	0.06	46.5
6	R2	15	1.0	16	1.0	0.017	4.9	LOS A	0.1	0.4	0.06	0.54	0.06	46.0
Approach		17	0.9	18	0.9	0.017	4.8	LOS A	0.1	0.4	0.06	0.54	0.06	46.1
North: Witton Place														
7	L2	22	1.0	23	1.0	0.040	4.6	LOS A	0.2	1.3	0.02	0.52	0.02	46.6
8	T1	2	0.0	2	0.0	0.040	0.0	LOS A	0.2	1.3	0.02	0.52	0.02	47.1
9	R2	45	0.0	47	0.0	0.040	4.6	LOS A	0.2	1.3	0.02	0.52	0.02	46.2
Approach		69	0.3	73	0.3	0.040	4.4	NA	0.2	1.3	0.02	0.52	0.02	46.4
West: Road 2														
10	L2	19	0.0	20	0.0	0.014	4.6	LOS A	0.1	0.4	0.01	0.52	0.01	46.7
11	T1	1	0.0	1	0.0	0.014	3.4	LOS A	0.1	0.4	0.01	0.52	0.01	46.7
12	R2	1	0.0	1	0.0	0.014	4.8	LOS A	0.1	0.4	0.01	0.52	0.01	46.2
Approach		21	0.0	22	0.0	0.014	4.5	LOS A	0.1	0.4	0.01	0.52	0.01	46.6
All Vehicles		110	0.3	116	0.3	0.040	4.5	NA	0.2	1.3	0.02	0.52	0.02	46.4

Base 2033 + Site +WPCA AM Cargo Road & Witton Place Assignment 2

MOVEMENT SUMMARY

▽ Site: 1 [Cargo & Witton Base 2033 AM Peak + WPCA Assignment 2 (Site Folder: General)]

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	2	1.0	2	1.0	0.117	5.6	LOS A	0.4	3.0	0.58	0.79	0.58	46.3
3	R2	53	1.0	56	1.0	0.117	10.2	LOS A	0.4	3.0	0.58	0.79	0.58	46.1
Approach		55	1.0	58	1.0	0.117	10.1	LOS A	0.4	3.0	0.58	0.79	0.58	46.1
East: Cargo Road														
4	L2	21	1.0	22	1.0	0.012	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	222	5.0	234	5.0	0.124	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		243	4.7	256	4.7	0.124	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Cargo Road														
11	T1	313	5.0	329	5.0	0.174	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	2	1.0	2	1.0	0.002	6.4	LOS A	0.0	0.1	0.34	0.55	0.34	48.6
Approach		315	5.0	332	5.0	0.174	0.1	NA	0.0	0.1	0.00	0.00	0.00	59.8
All Vehicles		613	4.5	645	4.5	0.174	1.1	NA	0.4	3.0	0.05	0.09	0.05	58.1

Base 2033 + Site +WPCA PM Cargo Road & Witton Place Assignment 2

MOVEMENT SUMMARY

▽ Site: 1 [Cargo & Witton Base 2033 PM Peak + WPCA Assignment 2 (Site Folder: General)]

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	3	1.0	3	1.0	0.057	6.1	LOS A	0.2	1.5	0.55	0.73	0.55	46.8
3	R2	26	1.0	27	1.0	0.057	9.5	LOS A	0.2	1.5	0.55	0.73	0.55	46.7
Approach		29	1.0	31	1.0	0.057	9.2	LOS A	0.2	1.5	0.55	0.73	0.55	46.7
East: Cargo Road														
4	L2	53	1.0	56	1.0	0.030	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	319	5.0	336	5.0	0.178	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		372	4.4	392	4.4	0.178	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.9
West: Cargo Road														
11	T1	170	5.0	179	5.0	0.095	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	1	1.0	1	1.0	0.001	7.1	LOS A	0.0	0.0	0.43	0.56	0.43	48.4
Approach		171	5.0	180	5.0	0.095	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		572	4.4	602	4.4	0.178	1.0	NA	0.2	1.5	0.03	0.09	0.03	58.4

Base 2033 + Site +WPCA AM Cargo Road & Road 1 Assignment 2

MOVEMENT SUMMARY

▽ **Site: [Cargo Road & Road 1 Base 2033 AM Peak + WPCA Assignment 2 (Site Folder: General)]**

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	14	1.0	15	1.0	0.080	5.3	LOS A	0.3	1.9	0.41	0.66	0.41	45.3
3	R2	49	1.0	52	1.0	0.080	7.2	LOS A	0.3	1.9	0.41	0.66	0.41	44.9
Approach		63	1.0	66	1.0	0.080	6.8	LOS A	0.3	1.9	0.41	0.66	0.41	45.0
East: Cargo Road														
4	L2	21	1.0	22	1.0	0.125	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	49.2
5	T1	202	5.0	213	5.0	0.125	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
Approach		223	4.6	235	4.6	0.125	0.5	NA	0.0	0.0	0.00	0.05	0.00	49.6
West: Cargo Road														
11	T1	301	5.0	317	5.0	0.172	0.0	LOS A	0.1	0.4	0.02	0.01	0.02	49.9
12	R2	6	1.0	6	1.0	0.172	5.5	LOS A	0.1	0.4	0.02	0.01	0.02	48.9
Approach		307	4.9	323	4.9	0.172	0.1	NA	0.1	0.4	0.02	0.01	0.02	49.9
All Vehicles		593	4.4	624	4.4	0.172	1.0	NA	0.3	1.9	0.05	0.10	0.05	49.2

Base 2033 + Site +WPCA PM Cargo Road & Road 1 Assignment 2

MOVEMENT SUMMARY

▽ **Site: [Cargo Road & Road 1 Base 2033 PM Peak + WPCA Assignment 2 (Site Folder: General)]**

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	6	1.0	6	1.0	0.030	5.5	LOS A	0.1	0.7	0.41	0.62	0.41	45.5
3	R2	19	1.0	20	1.0	0.030	6.7	LOS A	0.1	0.7	0.41	0.62	0.41	45.1
Approach		25	1.0	26	1.0	0.030	6.4	LOS A	0.1	0.7	0.41	0.62	0.41	45.2
East: Cargo Road														
4	L2	45	1.0	47	1.0	0.180	4.6	LOS A	0.0	0.0	0.00	0.08	0.00	49.0
5	T1	277	5.0	292	5.0	0.180	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	49.5
Approach		322	4.4	339	4.4	0.180	0.7	NA	0.0	0.0	0.00	0.08	0.00	49.4
West: Cargo Road														
11	T1	150	5.0	158	5.0	0.094	0.2	LOS A	0.1	0.9	0.08	0.05	0.08	49.5
12	R2	13	1.0	14	1.0	0.094	5.9	LOS A	0.1	0.9	0.08	0.05	0.08	48.5
Approach		163	4.7	172	4.7	0.094	0.6	NA	0.1	0.9	0.08	0.05	0.08	49.4
All Vehicles		510	4.3	537	4.3	0.180	0.9	NA	0.1	0.9	0.05	0.09	0.05	49.2

Base 2033 + Site +WPCA AM Witton Place & Taloumbi Place & Road 2 Assignment 2

MOVEMENT SUMMARY

▽ Site: 2 [Witton & Taloumbi & Road 2 2033 AM Peak + WPCA Assignment 2 (Site Folder: General)]

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	1	0.0	1	0.0	0.003	4.6	LOS A	0.0	0.0	0.02	0.22	0.02	48.2
2	T1	3	0.0	3	0.0	0.003	0.0	LOS A	0.0	0.0	0.02	0.22	0.02	48.7
3	R2	1	0.0	1	0.0	0.003	4.6	LOS A	0.0	0.0	0.02	0.22	0.02	47.8
Approach		5	0.0	5	0.0	0.003	1.8	NA	0.0	0.0	0.02	0.22	0.02	48.4
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.020	4.6	LOS A	0.1	0.5	0.04	0.54	0.04	46.5
5	T1	1	0.0	1	0.0	0.020	3.3	LOS A	0.1	0.5	0.04	0.54	0.04	46.6
6	R2	19	1.0	20	1.0	0.020	4.8	LOS A	0.1	0.5	0.04	0.54	0.04	46.1
Approach		21	0.9	22	0.9	0.020	4.7	LOS A	0.1	0.5	0.04	0.54	0.04	46.1
North: Witton Place														
7	L2	8	1.0	8	1.0	0.013	4.6	LOS A	0.1	0.4	0.03	0.51	0.03	46.7
8	T1	1	0.0	1	0.0	0.013	0.0	LOS A	0.1	0.4	0.03	0.51	0.03	47.1
9	R2	14	0.0	15	0.0	0.013	4.6	LOS A	0.1	0.4	0.03	0.51	0.03	46.2
Approach		23	0.3	24	0.3	0.013	4.4	NA	0.1	0.4	0.03	0.51	0.03	46.4
West: Road 2														
10	L2	33	0.0	35	0.0	0.023	4.6	LOS A	0.1	0.6	0.02	0.52	0.02	46.6
11	T1	1	0.0	1	0.0	0.023	3.3	LOS A	0.1	0.6	0.02	0.52	0.02	46.7
12	R2	1	0.0	1	0.0	0.023	4.7	LOS A	0.1	0.6	0.02	0.52	0.02	46.2
Approach		35	0.0	37	0.0	0.023	4.5	LOS A	0.1	0.6	0.02	0.52	0.02	46.6
All Vehicles		84	0.3	88	0.3	0.023	4.4	NA	0.1	0.6	0.03	0.50	0.03	46.5

Base 2033 + Site +WPCA PM Witton Place & Taloumbi Place & Road 2 Assignment 2

MOVEMENT SUMMARY

▽ Site: 2 [Witton & Taloumbi & Road 2 2033 PM Peak + WPCA Assignment 2 (Site Folder: General)]

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.07	0.35	0.07	47.4
2	T1	1	0.0	1	0.0	0.002	0.0	LOS A	0.0	0.0	0.07	0.35	0.07	47.8
3	R2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.07	0.35	0.07	46.9
Approach		3	0.0	3	0.0	0.002	3.1	NA	0.0	0.0	0.07	0.35	0.07	47.4
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.016	4.6	LOS A	0.1	0.4	0.06	0.54	0.06	46.5
5	T1	1	0.0	1	0.0	0.016	3.3	LOS A	0.1	0.4	0.06	0.54	0.06	46.6
6	R2	15	1.0	16	1.0	0.016	4.8	LOS A	0.1	0.4	0.06	0.54	0.06	46.1
Approach		17	0.9	18	0.9	0.016	4.7	LOS A	0.1	0.4	0.06	0.54	0.06	46.1
North: Witton Place														
7	L2	22	1.0	23	1.0	0.031	4.6	LOS A	0.1	0.9	0.02	0.52	0.02	46.7
8	T1	2	0.0	2	0.0	0.031	0.0	LOS A	0.1	0.9	0.02	0.52	0.02	47.1
9	R2	30	0.0	32	0.0	0.031	4.6	LOS A	0.1	0.9	0.02	0.52	0.02	46.3
Approach		54	0.4	57	0.4	0.031	4.4	NA	0.1	0.9	0.02	0.52	0.02	46.5
West: Road 2														
10	L2	13	0.0	14	0.0	0.010	4.6	LOS A	0.0	0.3	0.01	0.52	0.01	46.7
11	T1	1	0.0	1	0.0	0.010	3.4	LOS A	0.0	0.3	0.01	0.52	0.01	46.7
12	R2	1	0.0	1	0.0	0.010	4.7	LOS A	0.0	0.3	0.01	0.52	0.01	46.2
Approach		15	0.0	16	0.0	0.010	4.5	LOS A	0.0	0.3	0.01	0.52	0.01	46.6
All Vehicles		89	0.4	94	0.4	0.031	4.4	NA	0.1	0.9	0.03	0.52	0.03	46.5

Base 2033 + Site +WPCA AM Cargo Road & Witton Place Assignment 3

MOVEMENT SUMMARY

▽ Site: 1 [Cargo & Witton Base 2033 AM Peak + WPCA Assignment 3 (Site Folder: General)]

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	2	1.0	2	1.0	0.106	5.5	LOS A	0.4	2.7	0.59	0.80	0.59	46.0
3	R2	45	1.0	47	1.0	0.106	10.8	LOS A	0.4	2.7	0.59	0.80	0.59	45.8
Approach		47	1.0	49	1.0	0.106	10.6	LOS A	0.4	2.7	0.59	0.80	0.59	45.9
East: Cargo Road														
4	L2	18	1.0	19	1.0	0.010	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	211	5.0	222	5.0	0.118	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		229	4.7	241	4.7	0.118	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.4
West: Cargo Road														
11	T1	359	5.0	378	5.0	0.200	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	2	1.0	2	1.0	0.002	6.4	LOS A	0.0	0.1	0.33	0.55	0.33	48.7
Approach		361	5.0	380	5.0	0.200	0.1	NA	0.0	0.1	0.00	0.00	0.00	59.8
All Vehicles		637	4.6	671	4.6	0.200	1.0	NA	0.4	2.7	0.04	0.08	0.04	58.4

Base 2033 + Site +WPCA PM Cargo Road & Witton Place Assignment 3

MOVEMENT SUMMARY

▽ Site: 1 [Cargo & Witton Base 2033 PM Peak + WPCA Assignment 3 (Site Folder: General)]

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	3	1.0	3	1.0	0.049	5.9	LOS A	0.2	1.2	0.53	0.70	0.53	47.1
3	R2	23	1.0	24	1.0	0.049	9.1	LOS A	0.2	1.2	0.53	0.70	0.53	46.9
Approach		26	1.0	27	1.0	0.049	8.8	LOS A	0.2	1.2	0.53	0.70	0.53	46.9
East: Cargo Road														
4	L2	45	1.0	47	1.0	0.026	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	296	5.0	312	5.0	0.165	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		341	4.5	359	4.5	0.165	0.8	NA	0.0	0.0	0.00	0.08	0.00	59.0
West: Cargo Road														
11	T1	172	5.0	181	5.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	1	1.0	1	1.0	0.001	6.9	LOS A	0.0	0.0	0.41	0.55	0.41	48.5
Approach		173	5.0	182	5.0	0.096	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		540	4.5	568	4.5	0.165	0.9	NA	0.2	1.2	0.03	0.08	0.03	58.5

Base 2033 + Site +WPCA AM Cargo Road & Road 1 Assignment 3

MOVEMENT SUMMARY

Site: [Cargo Road & Road 1 Base 2033 AM Peak + WPCA Assignment 3 (Site Folder: General)]

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	14	1.0	15	1.0	0.091	5.2	LOS A	0.3	2.2	0.41	0.67	0.41	45.3
3	R2	58	1.0	61	1.0	0.091	7.1	LOS A	0.3	2.2	0.41	0.67	0.41	44.9
Approach		72	1.0	76	1.0	0.091	6.8	LOS A	0.3	2.2	0.41	0.67	0.41	45.0
East: Cargo Road														
4	L2	25	1.0	26	1.0	0.119	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	49.1
5	T1	188	5.0	198	5.0	0.119	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	49.6
Approach		213	4.5	224	4.5	0.119	0.6	NA	0.0	0.0	0.00	0.06	0.00	49.5
West: Cargo Road														
11	T1	301	5.0	317	5.0	0.172	0.0	LOS A	0.1	0.4	0.02	0.01	0.02	49.9
12	R2	6	1.0	6	1.0	0.172	5.4	LOS A	0.1	0.4	0.02	0.01	0.02	48.9
Approach		307	4.9	323	4.9	0.172	0.1	NA	0.1	0.4	0.02	0.01	0.02	49.9
All Vehicles		592	4.3	623	4.3	0.172	1.1	NA	0.3	2.2	0.06	0.11	0.06	49.1

Base 2033 + Site +WPCA PM Cargo Road & Road 1 Assignment 3

MOVEMENT SUMMARY

Site: [Cargo Road & Road 1 Base 2033 PM Peak + WPCA Assignment 3 (Site Folder: General)]

Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Road 1														
1	L2	6	1.0	6	1.0	0.033	5.4	LOS A	0.1	0.8	0.39	0.62	0.39	45.6
3	R2	22	1.0	23	1.0	0.033	6.5	LOS A	0.1	0.8	0.39	0.62	0.39	45.2
Approach		28	1.0	29	1.0	0.033	6.3	LOS A	0.1	0.8	0.39	0.62	0.39	45.3
East: Cargo Road														
4	L2	52	1.0	55	1.0	0.167	4.6	LOS A	0.0	0.0	0.00	0.09	0.00	48.9
5	T1	247	5.0	260	5.0	0.167	0.1	LOS A	0.0	0.0	0.00	0.09	0.00	49.4
Approach		299	4.3	315	4.3	0.167	0.8	NA	0.0	0.0	0.00	0.09	0.00	49.3
West: Cargo Road														
11	T1	150	5.0	158	5.0	0.094	0.1	LOS A	0.1	0.8	0.08	0.05	0.08	49.5
12	R2	13	1.0	14	1.0	0.094	5.8	LOS A	0.1	0.8	0.08	0.05	0.08	48.5
Approach		163	4.7	172	4.7	0.094	0.6	NA	0.1	0.8	0.08	0.05	0.08	49.4
All Vehicles		490	4.2	516	4.2	0.167	1.1	NA	0.1	0.8	0.05	0.11	0.05	49.1

Base 2033 + Site +WPCA AM Witton Place & Taloumbi Place & Road 2 Assignment 3

MOVEMENT SUMMARY

▽ **Site: 2 [Witton & Taloumbi & Road 2 2033 AM Peak + WPCA Assignment 3 (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	1	0.0	1	0.0	0.003	4.6	LOS A	0.0	0.0	0.02	0.22	0.02	48.2
2	T1	3	0.0	3	0.0	0.003	0.0	LOS A	0.0	0.0	0.02	0.22	0.02	48.7
3	R2	1	0.0	1	0.0	0.003	4.6	LOS A	0.0	0.0	0.02	0.22	0.02	47.8
Approach		5	0.0	5	0.0	0.003	1.8	NA	0.0	0.0	0.02	0.22	0.02	48.4
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.020	4.6	LOS A	0.1	0.5	0.04	0.54	0.04	46.5
5	T1	1	0.0	1	0.0	0.020	3.2	LOS A	0.1	0.5	0.04	0.54	0.04	46.6
6	R2	19	1.0	20	1.0	0.020	4.8	LOS A	0.1	0.5	0.04	0.54	0.04	46.1
Approach		21	0.9	22	0.9	0.020	4.7	LOS A	0.1	0.5	0.04	0.54	0.04	46.1
North: Witton Place														
7	L2	8	1.0	8	1.0	0.012	4.6	LOS A	0.0	0.3	0.03	0.51	0.03	46.7
8	T1	1	0.0	1	0.0	0.012	0.0	LOS A	0.0	0.3	0.03	0.51	0.03	47.1
9	R2	11	0.0	12	0.0	0.012	4.6	LOS A	0.0	0.3	0.03	0.51	0.03	46.3
Approach		20	0.4	21	0.4	0.012	4.3	NA	0.0	0.3	0.03	0.51	0.03	46.5
West: Road 2														
10	L2	25	0.0	26	0.0	0.018	4.6	LOS A	0.1	0.5	0.02	0.52	0.02	46.6
11	T1	1	0.0	1	0.0	0.018	3.3	LOS A	0.1	0.5	0.02	0.52	0.02	46.7
12	R2	1	0.0	1	0.0	0.018	4.6	LOS A	0.1	0.5	0.02	0.52	0.02	46.2
Approach		27	0.0	28	0.0	0.018	4.5	LOS A	0.1	0.5	0.02	0.52	0.02	46.6
All Vehicles		73	0.4	77	0.4	0.020	4.3	NA	0.1	0.5	0.03	0.50	0.03	46.6

Base 2033 + Site +WPCA PM Witton Place & Taloumbi Place & Road 2 Assignment 3

MOVEMENT SUMMARY

▽ **Site: 2 [Witton & Taloumbi & Road 2 2033 PM Peak + WPCA Assignment 3 (Site Folder: General)]**

Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Witton Place														
1	L2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.07	0.35	0.07	47.4
2	T1	1	0.0	1	0.0	0.002	0.0	LOS A	0.0	0.0	0.07	0.35	0.07	47.8
3	R2	1	0.0	1	0.0	0.002	4.6	LOS A	0.0	0.0	0.07	0.35	0.07	46.9
Approach		3	0.0	3	0.0	0.002	3.1	NA	0.0	0.0	0.07	0.35	0.07	47.4
East: Taloumbi Place														
4	L2	1	0.0	1	0.0	0.016	4.6	LOS A	0.1	0.4	0.06	0.54	0.06	46.5
5	T1	1	0.0	1	0.0	0.016	3.3	LOS A	0.1	0.4	0.06	0.54	0.06	46.6
6	R2	15	1.0	16	1.0	0.016	4.8	LOS A	0.1	0.4	0.06	0.54	0.06	46.1
Approach		17	0.9	18	0.9	0.016	4.7	LOS A	0.1	0.4	0.06	0.54	0.06	46.2
North: Witton Place														
7	L2	22	1.0	23	1.0	0.027	4.6	LOS A	0.1	0.7	0.02	0.51	0.02	46.7
8	T1	2	0.0	2	0.0	0.027	0.0	LOS A	0.1	0.7	0.02	0.51	0.02	47.1
9	R2	22	0.0	23	0.0	0.027	4.6	LOS A	0.1	0.7	0.02	0.51	0.02	46.3
Approach		46	0.5	48	0.5	0.027	4.4	NA	0.1	0.7	0.02	0.51	0.02	46.5
West: Road 2														
10	L2	10	0.0	11	0.0	0.008	4.6	LOS A	0.0	0.2	0.01	0.52	0.01	46.7
11	T1	1	0.0	1	0.0	0.008	3.3	LOS A	0.0	0.2	0.01	0.52	0.01	46.7
12	R2	1	0.0	1	0.0	0.008	4.7	LOS A	0.0	0.2	0.01	0.52	0.01	46.3
Approach		12	0.0	13	0.0	0.008	4.5	LOS A	0.0	0.2	0.01	0.52	0.01	46.7
All Vehicles		78	0.5	82	0.5	0.027	4.4	NA	0.1	0.7	0.03	0.51	0.03	46.5

Appendix C: Sight Distance Assessment

Prepared by Heath Consulting Engineers, provided as a separate document.

HEATH CONSULTING ENGINEERS

HENGCON PTY LTD
ACN 103 488 348

Postal Address:
PO BOX 2501
ORANGE NSW 2800

Office Location:
351 SUMMER STREET
ORANGE NSW

Our Ref: L01_19_073

14 November 2023

ARC Traffic & Transport
19 Canoon Road
SOUTH TURRAMURRA NSW 2074

Attention:

Dear Sir,

RE. PLANNING PROPOSAL PP-2023-934 - 277 CARGO ROAD, ORANGE – TRANSPORT ASSESSMENT

Reference is made to the Trasport Assessment for the above planning proposal and Transport for New South Wales (TfNSW) request for confirmation of Safe Intersection Sight Distance (SISD) at the proposed intersection location.

On Thursday 9 November 2023 a visual assessment of the SISD was carried out by this office. This assessment involved measuring the required SISD for TfNSW's intersection design speed of 10km/h above the posted speed limit (60km/h) using driver eye height of 1.1m and 1.25m for top of approaching car. From Table 3.2 of Austroads *Guide to Road Design Part 4A: Unsignalised Intersections (2017)* the required SISD for a design speed of 70km/h without grade correction is 151m.

Photographs of the sight distance assessment are included for reference. It must be noted that the photographs were taken from near the edge of the road. This was due to the fact that street trees would have obstructed the view with the photograph taken at 3 to 5m from edge line. It is proposed that the smaller trees to the east and west will be transplanted into the proposed new road to enable the intersection to be constructed. The larger pine trees to the east will be removed as part of the auxiliary left turn treatment construction with the small embankment also cut down for the widening thereby providing the required sight distance when measured at 3 to 5m behind the edge line.

The assessment showed that SISD would be achieved with the proposed intersection construction. Further, it is understood that Council may support a lowering of the posted speed limit to 50km/h and as such the SISD for 60km/h would be reduced to 123m without grade correction.

Telephone: (02) 6360 0755 Email: admin@heathce.com

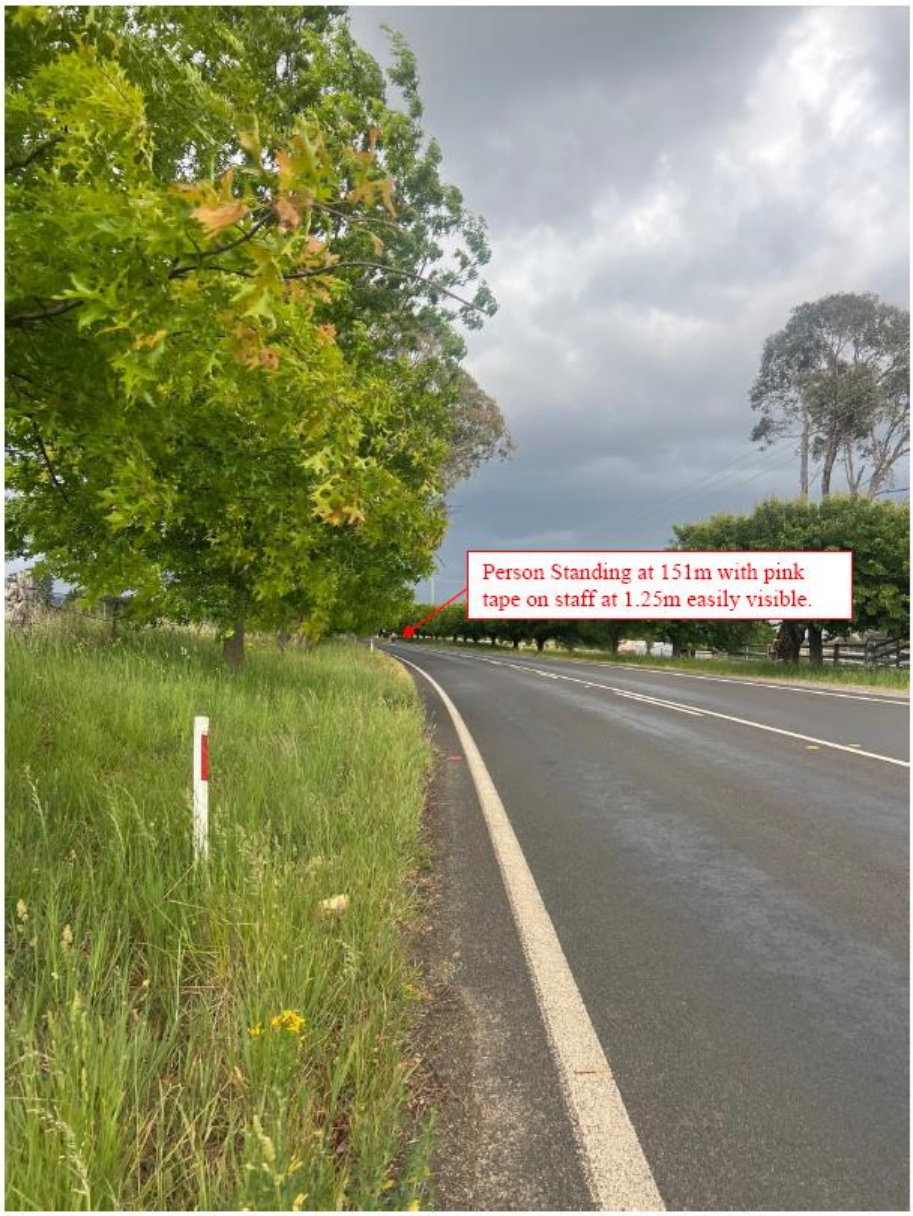


Figure 1 – View to the West from Proposed Intersection. Sight distance exceeds 151m
Three/Four small trees to the west to be transplanted into the road reserve of the proposed road.



Figure 2 – View to the East from Proposed Intersection. Sight distance exceeds 151m
Two small trees to the east to be transplanted into the road reserve of the proposed road. Larger pine trees to be removed as part of AUL construction.

If you have any questions or require additional information do not hesitate to contact the undersigned.

Yours faithfully
Heath Consulting Engineers

Per:
ROGER HEATH

Telephone: (02) 6360 0755 Email: admin@heathce.com

D24/108600

ADDENDUM **Transport Assessment**

FROM **Civil Designer, Technical Services, Orange City Council**

DATE **01 October 2024**

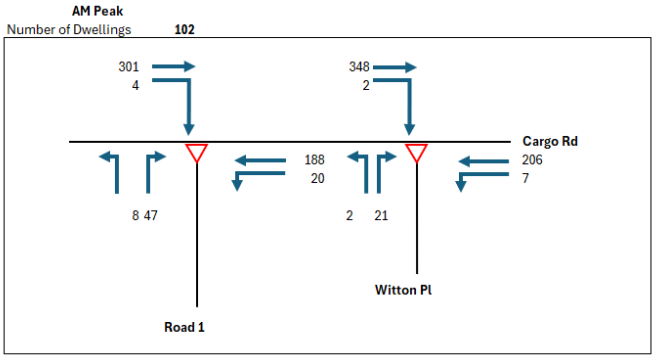
ON **277 Cargo Road – Gateway Alteration**

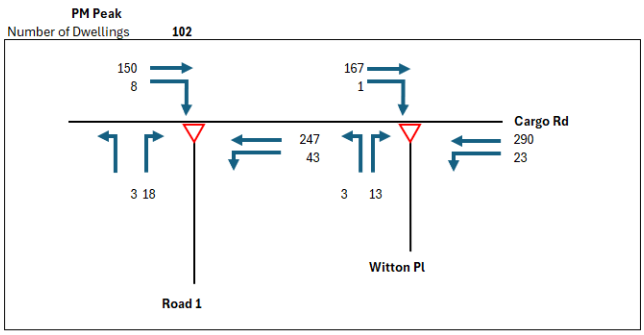
Introduction
The amended Planning Proposal provides for the development of a residential subdivision on the Site. The Proposal is seeking to provide for approximately 102 lots and is anticipated to develop of two stages. The concept plan for the site is shown in Figure 1.

Access to Cargo Road
The Proposal continues to create 1 additional access road to Cargo Road. Secondary access has been identified as part of the proposal, however given there is no formal arrangement for creating the access, the Cargo Road access will apportion 100% of the traffic to that intersection for the allotments proposed under Stage 1.

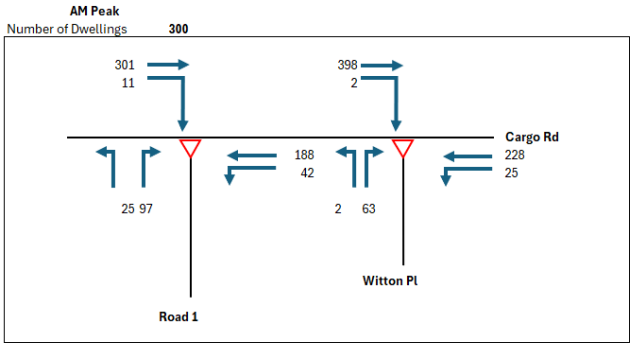
Future Traffic Operations
The amended evaluation uses the same traffic generation rates, directional distribution, trip assignments to Cargo Road intersections, and arrival and departure distribution as the previous transport assessment; with 100% of the site volume assigned to Cargo Road/Road 1 intersection for the Candidate Area, as outlined above.

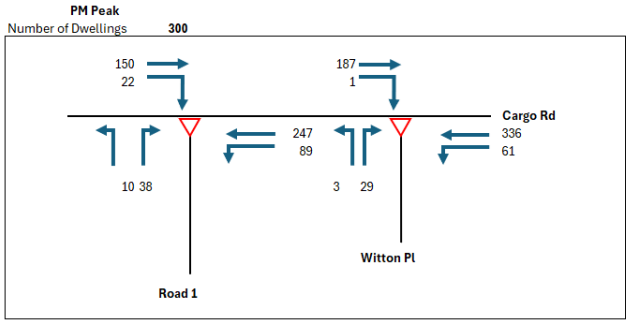
Note: the trip generation is based off Guide to Traffic Generating Developments (RTA, 2002), which has recently been superseded by Guide to Transport Impact Assessments (TfNSW, Sep 2024).
The volumes generated in the AM and PM Peak for the 102 dwellings are as follows-



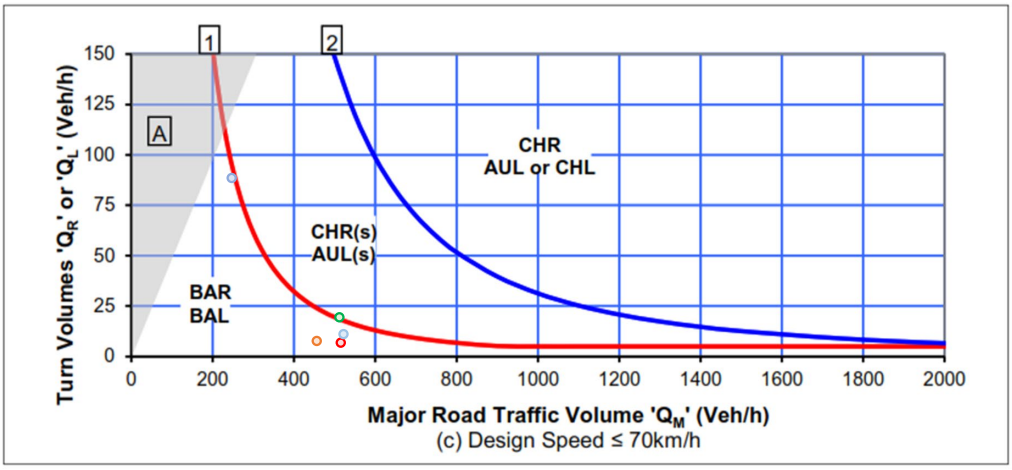


The volumes for the site generated at 300 dwellings were as follows-





Design Warrant for Cargo Road



Source: Austroads GTM Part 6

Colour	Lot Yield	Peak Period	Turn Type	Volume	Distribution
Red	102	AM Peak	Right Turn	Q_R =4 Veh/h, Q_M =509 Veh/h	(All use Road 1 - 100% of Entering Right Turn Traffic, 100% of Entering Left Turn Traffic)
Orange	102	PM Peak	Right Turn	Q_R =8 Veh/h, Q_M =440 Veh/h	(All use Road 1 - 100% of Entering Right Turn Traffic, 100% of Entering Left Turn Traffic)
Purple	300	AM Peak	Left Turn	Q_L =89 Veh/h, Q_M = 247 Veh/h	(Assignment 3 - 100% of Entering Right Turn Traffic, 70% of Entering Left Turn Traffic)
Blue	300	AM Peak	Right Turn	Q_R =11 Veh/h, Q_M = 531 Veh/h	(Assignment 3 - 100% of Entering Right Turn Traffic, 70% of Entering Left Turn Traffic)
Green	300	PM Peak	Right Turn	Q_R =22 Veh/h, Q_M =486 Veh/h	(Assignment 3 - 100% of Entering Right Turn Traffic, 70% of Entering Left Turn Traffic)

As shown an increase in yield for the current Planning Proposal to 102 lots still permits the treatment of the intersection of Cargo Road/Road 1 as a BAR/BAL treatment.

When evaluating the candidate area for 300 lots, the intersection is on the threshold for both the left treatment requiring an AUL(s) and the right turning treatment requiring a CHR(s) treatment, this should be further evaluated with any subsequent planning proposals.

Note: Cargo Road does not appear to be fully contained within the road corridor in this location, and further survey would be required to investigate the extent of this issue.

Note: the impacts on the internal road volumes are low and have not been further evaluated further at this time.

Summary

Council's traffic engineers have determined the following requirements based on the amended proposal and have determined:

- A BAR intersection is required with widening for right turn overtaking. An AUL (left turn lane) is appropriate, although not Austroad required.
- For any future proposals that increase the yield above 300 lots a CHR intersection will be required at Cargo Road, regardless of the secondary road as that intersection will accommodate all the right turns into the estate.

Based on the above, the amended Planning Proposal does not have any significant impact on the ability of the intersection to operate at a good Level of Service and the design remains consistent with the prior intersection design. The current assessment volumes show that the intersection should perform successfully as a BAR, and should be reevaluated further with any changes in traffic volumes, as well as for any proposals exceeding 300 lots, where the BAR treatment begins to exceed capacity.

Anton Reisch, Director of arc traffic + transport, has reviewed the addendum above prepared by Orange City Council, and is supportive of the analysis and recommendations of the addendum, noting:

- The warrants for a CHR at the new intersection of Cargo Road & Road 1 would only be met if the Site is developed for 300 dwellings. As outlined in the addendum therefore, in the short term a BAR for the right turn from Cargo Road to Road 1 would be appropriate, with the requirement for a CHR to be determined at a future date.
- While not required by Austroads, a CHL from Cargo Road to Road 1 could reasonably be considered, which would align with the design of the left turn treatment from Cargo Road to Witton Place.

14/10/2024

Preliminary Flora and Fauna assessment

Proposed Residential Subdivision
277 Cargo Road, Orange NSW



Ref: R15156ff
Date: 29 March 2023

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0	R15156ff	29 March 2023	Eliza Hurst BSc & BNSc Environmental Scientist	Leah Desborough CEnvP Senior Environmental Scientist	
		18 April 2023	Eliza Hurst BSc & BNSc Environmental Scientist	Leah Desborough CEnvP Senior Environmental Scientist	Change number of lots

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Executive Summary

Background
A residential subdivision is proposed for 277 Cargo Road, Orange NSW. The proposed development will include seventy-two residential lots and one public recreation reserve. Two dwellings and several small sheds exist in the north-eastern corner of the lot where land-use will not change. The structures will be allocated to two of the proposed residential lots. The site has a current land-use of sheep and horse grazing with a land-use history of apple orcharding.

The subject site is 277 Cargo Road, Orange NSW and has an area of approximately 11.1 hectares located adjacent to an existing developing residential area. Land to the east has been developed for residential land-use, land to the north and west remains agricultural land and to the south is residential and commercial with the Orange Broken Hill Railway Line.

An assessment of the development is required to determine impacts on flora and fauna as part of the development application.

Scope
This report is a preliminary flora and fauna assessment for the existence of key habitats or threatened species, provides an overview of the flora and fauna species present and assesses the impact of the residential subdivision on flora and fauna.

Summary
An assessment of the impacts of the subdivision was undertaken by site inspection and desktop study.

The subject site comprises predominantly introduced pasture grasses and broadleaved weeds with minor native grasses, herbs and rushes. Isolated stands of fruit trees and conifer wind breaks exist on-site. Vegetation has been extensively modified through historical practices associated with apple orcharding from the 1960's to 1990's, pasture improvement and livestock grazing. Current livestock grazing practices are expected to impact on the usage of the grassland by fauna. Grazing increases bare ground cover, reduces native vegetation cover and diversity, increases the risk of weed invasion and reduces foraging habitat and shelter for fauna derived from the grasslands. No threatened floral species were identified on the subject site.

Faunal habitat comprised limited nesting areas due to lack of significant trees and understorey. The conifer windbreak and apple trees may provide fauna that do not require hollows with nesting sites. Farm dams and tall grasses provide shelter and foraging habitat for fauna. Food sources include insects, berries, seeds, aquatic invertebrates and grazing fodder. No threatened fauna species were identified on the subject site.

An area of native rushes, tussock grass, and herb located at the natural drainage depression to the south, on the lower slopes to the west and at the horse yards will be removed to create residential lots and access roads. No other native vegetation will be removed.

No impacts on threatened species with potential to occur in the study area from the development were identified in the Biodiversity Conservation Act (2016) Test of Significance or EPBC Act considerations. The area to be cleared is less than the threshold for native vegetation clearing. The site is not located within land with high biodiversity value as defined by clause 7.3(3) of the Biodiversity Conservation Regulation 2017 from a review of the biodiversity values map. The proposed development does not trigger the Biodiversity Offset Scheme Thresholds.

The development is not expected to have a significant impact on the long-term survival of threatened species and communities in the South Eastern Highlands Bioregion.

Recommendations

The following actions are recommended:

- Avoid the introduction of additional introduced plants that may become weeds in adjacent areas.
- Implementation of erosion and sediment control plans prior to construction activities.

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1. Background

A residential subdivision is proposed for 277 Cargo Road, Orange NSW. The proposed development will include seventy-two residential lots and a public recreation reserve. Two dwellings and several small sheds exist in the north-eastern corner of the lot where land-use will not change. The structures will be located at one of the proposed residential lots. The site has a current land-use of sheep and horse grazing with a land-use history of apple orcharding.

An assessment of the development is required to determine impacts on flora and fauna as part of the development application.

The subject site is 277 Cargo Road, Orange NSW and has an area of approximately 11.1 hectares located adjacent to an existing developing residential area. Land to the east has been developed for residential land-use, land to the north and west remains agricultural land and to the south is residential and commercial with the Orange Broken Hill Railway Line.

2. Scope of report

Envirowest Consulting Pty Ltd was commissioned by Fenlor Group Pty Ltd to undertake a preliminary flora and fauna assessment of 277 Cargo Road, Orange NSW.

The assessment will assess the existence of habitat and give an overview of the flora species present. The assessment aims to identify impacts the development may have on threatened flora and fauna species, their communities and any ecological interactions that may occur on the site.

3. Site description

3.1 Location

The subject site is the area directly affected by the proposed development. The subject site has an area of approximately 11.1ha and includes access roads, sewage infrastructure, underground services, a slip lane from Cargo Road and one public recreation reserve (Figure 3).

The study area are additional areas likely to be affected (directly or indirectly) by the development and includes the subject site. The study area consists of 277 Cargo Road and a 50m buffer in all directions from the subject site (Figure 1).

The study area is located along the fringes of west Orange (Figure 1) and is located in the South Eastern Highlands Bioregion.

3.2 Climate

Climatic data from the nearest recording station located at Orange Airport indicates the study area has an average annual rainfall of 945mm. Rainfall is most significant in November with an average of 94.1 mm. April is the driest month of the year receiving a rainfall average of 45.3mm.

Availability of soil moisture is lowest in summer and not usually limiting in winter when rainfall exceeds evaporation. Low winter temperatures restrict plant growth from May to September so that plant growth is most active during spring and autumn.

3.3 Topography

The subject site is located on a mid-slope with a predominant westerly and southerly aspect. Elevation ranges between 907 and 913 metres above sea level with inclines ranging between 1 and 2%. The lowest elevation occurs on the western boundary of the site.

3.4 Vegetation

Ground cover was dominated by introduced pasture species including Phalaris and bulbous oat grass. Vegetation cover was generally 95% across the subject site. A stand of *Pinus radiata* (radiata pine) and conifer spp. are located along the southern boundary. It is expected the southern boundary was maintained as a wind break during historical orcharding activities.

Vegetation on the site has been modified through historical clearing and agricultural practices. Historical imagery indicates the site comprised an apple orchard from the 1960's and the use of fertilisers and herbicides is considered likely. A remnant stand of approximately fifty apple trees remains in the central southern section of the subject site. Remnant fruit trees are also located on the western boundary and as isolated paddock trees across the site. Ornamental species including ivy and grape vines are located around the existing dwellings located in the north-eastern corner of the site.

A detailed description of the vegetation on the subject site is given in Section 6.1.

3.5 Land-uses

The land-use is rural. The subject site is currently used for sheep grazing and holding yards and pasture for horses. Historical grazing and orcharding activities have included land clearing, introduction of exotic species and application of fertilisers and herbicides.

Land-use to the east comprises residential development, land to the north and east is predominantly grazing and to the south is residential and commercial with the Orange Broken Hill Railway Line.

3.6 Soils and geology

The site is located within the Towac Soil Landscape. Soil in the Towac Soil Landscape is located on undulating to rolling low hills and consists of krasnozems and yellow podzolic/solodic soils. Parent material is *in situ* and colluvial- alluvial materials derived from basalt flows separated by layers of volcanic ash. Basalts are alkaline olivines, with trachytes and some shales and slates.

No evidence of erosion or salinity was observed within the subject site.

3.7 Surface water

Surface water is largely expected to infiltrate. Excess surface water flows will follow topography on the site and flow towards farm dams located in the western section of the site and towards the natural drainage depression to the south.

3.8 Groundwater

No groundwater bores are known to be located on the site. The NSW Office of Water groundwater database identifies six bores located within 500m of the site. A summary of bore details is given in Table 1.

Table 1. Groundwater bores within 500m of the site

No.	Date drilled	Location	SWL (m)	Use	Status
GW802690	22/08/2003	300m NE	10	Domestic	Unknown
GW053937	01/09/1981	400m N	-	Irrigation	Unknown
GW802391	13/12/2004	400m NE	-	Stock, domestic	Unknown
GW803608	14/07/2008	450m NE	29	Stock, domestic	Unknown
GW056843	01/01/1983	400m SW	18.3	Stock, domestic	Unknown
GW064525	01/11/1987	450m SW	8.6	Stock, domestic	Unknown

4. Proposed development

The development proposes subdivision of the subject site into seventy-two residential lots and one public recreation reserve (Figure 3).

The seventy-two residential lots are expected to be connected to reticulated water and sewerage infrastructure and be accessible from sealed access roads. The development will remove all existing vegetation at the location of fifty-three of these residential lots. Vegetation at the final two residential lots comprising the two existing dwellings will have a stand of approximately five ornamental trees on the boundary removed to enable the construction of a slip lane to the subdivision. The stand of *Pinus radiata* (radiata pine) and conifer spp. located on the southern boundary of the subject site are to be retained and incorporated into a public nature reserve. Remnant fruit trees across the site will be removed.

A temporary retention basin may be constructed within the southwestern section of the subject site which will incorporate the two existing dams in the area. The retention basin will be filled and levelled following completion of stage 1 of the development and developed as residential lots and access roads.

5. Methodology

5.1 Desktop study

A desktop study was undertaken to collect information on individual species and in particular the presence of any threatened or endangered species. This was determined primarily by habitat assessment of the subject site and a search of the OEH Bionet database. The area for the database search covered a 5km radius from the subject site.

The Office of Environment and Heritage (OEH) NSW Threatened Species Website was reviewed for threatened species, populations and communities known or predicted to occur within the Orange Local Government Area.

The impact of the proposed development on flora and fauna on the subject site was assessed in accordance with the Test of Significance under Section 7.3 of the *Biodiversity Conservation Act* (2016) and EPBC Act considerations. The habitat, life cycles and general ecology of a range of both plant and animal species was researched. This and all other information has been used to make impact assessments.

The proposed development was assessed against the Biodiversity Offset Scheme thresholds in accordance with the *Biodiversity Conservation Act 2016* to determine if the Biodiversity Assessment Method applied.

5.2 Field surveys

An overall description of the subject site was completed by conducting a general field survey. The aim of the survey was to assess the subject site and study area which included a vegetation and topography assessment, identification of major land-uses, species identification, a land and water degradation assessment and evaluation of potential habitat for fauna.

The survey was undertaken on 27 January and 21 March 2023. The conditions on the day were fine and warm. Representative photographs of the site are presented in Figure 5.

The field data for flora species was recorded on a presence or absence basis.

6. Results and discussion

6.1 Flora

The study area consists of modified grasslands.

The subject site has an agricultural land-use history of apple orcharding and livestock grazing. The site is currently a rural holding currently grazed by sheep and horses. Vegetation across the subject site has been impacted by the orchard land-use history and current grazing practices.

The subject site consists primarily of modified grasslands dominated by introduced pasture grasses and broadleaved weeds including *Arrhenatherum elatius* (false oat grass), *Phalaris arundinacea* (reed canary grass), *Phalaris aquatica* (bulbous canary grass), *Bromus catharticus* (prairie grass), *Plantago lanceolata (*plantain), *Taraxacum officinale* (dandelion), *Onopordum acanthium* (scotch thistle) and *Echium plantagineum* (Paterson's curse). Small isolated stands of *Rubus fruticosus* (blackberry bush), *Crataegus monogyna* (hawthorn) and apple tree spp. are scattered across the site. Stands of *Pinus radiata* (radiata pine) are located on the southern boundary of the subject site and along the western and eastern boundary of the southern section.

Native species *Carex appressa* (tall sedge) and *Juncus usitatus* (common rush) were identified as closed rushland at the natural drainage depression to the south and on the banks of the two dams to the west. The total area of closed rushland on the subject site was approximately 0.79ha. Native rush species were also identified as very sparse on the lower slopes of the subject site to the west in an area of mixed grassland. A quadrat method was applied to estimate the total groundcover area of native rushes in this area. Rush species were estimated to occupy an average groundcover area of 0.022m^2 per plant with an average of four plants per 5m^2 quadrat. The calculated area of groundcover of rush species was 0.016ha.

Gnaphalium involucratum (star cudweed) was identified as isolated vegetation an area actively grazed by horses on-site and comprised an estimated total area of less than 0.0001ha. *Poa labillardierei* (poa tussock) was identified as isolated grasses in the southern paddock and comprised an estimated total area of approximately 0.0018ha. *C. appressa*, *J. usitatus*, *P. labillardierei* and *G. involucratum* are not deemed dominant species in the subject site and represents a small area of native vegetation.

Vegetation located around the existing dwelling and residential yard located in the northern section of the subject site consists primarily of ornamental and introduced species. Vegetation located along Cargo Road proposed to be removed as part of development works included introduced species *Cedrus deodara* (Himalayan cedar), *Hedera helix* (English ivy), *Pyrancantha coccinea* (golden firethorn), *Calocedrus decurrens* (California incense cedar), *Quercus ellipsoidalis* (northern pink oak) and *Sanseviera sp.* (snake plant). Native species *Callitris endlicheri* (black cypress pine) were identified on the eastern boundary of the residential yard and will not be affected by clearing works.

No threatened or endangered species were observed within the grasslands of the subject site. Flora recorded during the field surveys are presented in Table 2.

Table 2. Flora species recorded for each vegetation type

Scientific name	Common name	Species origin
Trees		
Callitris endlicheri	Black cypress pine	Native
Calocedrus decurrens	California incense cedar	Introduced
Cedrus deodara	Himalayan cedar	Introduced
Crataegus monogyna	Common hawthorn	Introduced
Malus sp.	Apple tree	Introduced
Pinus radiata	Radiata pine	Introduced
Prunus sp.	Plum tree	Introduced
Quercus ellipsoidalis	Northern pink oak	Introduced
Shrubs		
Rubus fruticosus	Blackberry	Introduced
Pyracantha coccinea	Golden firethorn	Introduced
Vines		
Hedera helix	English ivy	Introduced
Vitis sp.	Grape vine	Introduced
Herbs		
Amaranthus sp.	Amaranth	Introduced
Centaurium erythraea	Common centaury	Introduced
Chenopodium album	White goosefoot	Introduced
Cichorium intybus	Chicory	Introduced
Cirsium vulgare	Black thistle	Introduced
Echium plantagineum	Paterson's curse	Introduced
Euchiton sphaericus	Star cudweed	Native
Foeniculum vulgare	Wild fennel	Introduced
Hypericum perforatum	St John's Wort	Introduced
Hypochaeris radicata	Catsear	Introduced
Leontodon taraxacoides	Hairy hawkbit	Introduced
Malva parviflora	Common mallow weed	Introduced
Marrubium vulgare	White horehound	Introduced
Modiola caroliniana	Creeping mallow	Introduced
Plantago lanceolata	Plantain	Introduced
Rumex crispus	Curly dock	Introduced
Sinapis arvensis	Wild mustard	Introduced
Sonchus oleraceus	Sow thistle	Introduced
Taraxacum officinale	Dandelion	Introduced
Trifolium glomeratum	Cluster clover	Introduced
Trifolium repens	White clover	Introduced
Grasses		
Arrhenatherum elatius	Bulbous oat grass	Introduced
Bromus catharticus	Prairie grass	Introduced
Dactylis glomerata	Cocksfoot grass	Introduced
Paspalum dilatatum.	Paspalum grass	Introduced
Pennisetum clandestinum	Kikuyu grass	Introduced
Phalaris arundinacea	Reed canary grass	Introduced
Phalaris aquatica	Phalaris	Introduced
Poa labillardierei	Poa tussock	Native
Rushes		
Carex appressa	Tall sedge	Native
Juncus usitatus	Common rush	Native
Succulents		
Sansevieria sp.	Snake plant	Introduced

6.2 Fauna

Faunal habitat within the subject site was dominated by modified grasslands with isolated shrubs, apple trees and stands of radiata pine as wind breaks. The trees may be used by fauna as a food source in the form of insects, nesting in branches (birds) and habitat for reptiles. Logs and dead

standing timber were identified around the trees in the southern paddock and at a stockpile which may provide habitat for reptiles.

Groundcover vegetation would provide fauna with food (grazing, seeds and insects) and shelter. The presence of livestock and domestic animals is expected to impact on the usage of the grassland by fauna. Livestock grazing increases bare ground cover, reduces native vegetation cover and richness, increases the risk of weed invasion and reduces foraging habitat and shelter derived from the grasslands for fauna.

The dams on site may provide food for wading birds and a source of water for fauna on-site. Aquatic fauna may be present within the dams. Water tolerant vegetation is present at the natural drainage depression located in the southern section of the site and may provide habitat to fauna.

Fauna recorded during the field surveys are presented in Table 3.

No threatened or endangered fauna species were observed within the subject site.

Table 3. Fauna species identified in opportunistic observations

Scientific Name	Common Name	Comments
Apis mellifera	European honeybee	Sighted
Enallagma cyathigerum	Common blue damselfly	Sighted
Equus caballus	Domestic horse	Sighted farmstock
Felis catus	Feral cat	Sighted
Gymnorhina tibicen	Australian magpie	Sighted
Hortophora sp.	Orb spider	Sighted
Ovis aries	Domestic sheep	Sighted farmstock
Platycercus elegans	Crimson rosella	Sighted

6.3 Threatened species

6.3.1 Threatened species recorded within the study area

No threatened species or populations were identified on the subject site. No threatened species are listed on the OEH Bionet database as being recorded within the study area.

6.3.2 Threatened species recorded in the vicinity

Threatened flora and fauna species, which have been recorded in the vicinity, are listed in Table 4. The data was obtained from the OEH Bionet database. Each species is listed based on the opinion of the Scientific Committee according to the Biodiversity Conservation Act 2016 or in accordance with the EPBC Act (1999). The search area covered a 5km radius from the subject site.

Nineteen threatened species have been recorded within 5km of the subject site (Table 4). These are *Artamus cyanopterus cyanopterus*, *Certhionyx variegatus*, *Chthonicola sagittata*, *Daphoenositta chrysoptera*, *Eucalyptus aggregate, Eucalyptus canobolensis, Glossopsitta pusilla*, *Hieraaetus morphnoides*, *Oxyura australis, Petaurus norfolcensis, Petroica boodang, Petroica phoenicea, Phascolarctos cinereus, Polytelis swainsonii, Pteropus poliocephalus, Miniopterus orianae oceanensis, Ninox connivens, Staggonopleura guttata and Swainsona sericea. Phascolarctos cinereus* (koala) was recorded in 2016 as roadkill located in the main street of Orange. The accuracy of the recorded location was noted as 10km. It is considered the sighting location is inaccurate.

6.3.3 Threatened species with potential to occur in the vicinity

Threatened flora and fauna species, with the potential to occur in the area, are listed in Table 4. The data was obtained from the OEH Bionet database. The search area covered the Orange Local Government Area.

Habitat attributes for *Anthochaera Phrygia, Burhinus grallarius, Chthonicola sagittate, Climacteris picumnus victoriae, Epthianura albifrons, Hieraaetus morphnoides, Litoria booroolongensis, Petroica boodang, Petroica phoenicea, Polytelis swansonii, Rostratula australis, Saccolaimus flaviventris* and *Stagonopleura guttata* are found within the subject site. The survival of these species is not expected to be impacted by the development due to the relatively small amount of suitable habitat and availability of suitable alternative habitat elsewhere in the locality. The impact of the development on these species has been assessed in accordance with the Assessment of Significance (Appendix 2) and EPBC Act considerations (Appendix 3).

Habitat attributes for the remainder of the species listed in Table 4 are not found within the subject site though may occur elsewhere in the study area and/or vicinity. The survival of these species is not expected to be impacted by the development.

Table 4. Threatened species predicted to occur on the site from the NSW Threatened Species Website and recorded occurrence of threatened species on the NSW OEH Bionet (Search area – 5km radius of subject site)

Scientific Name	Common Name	Last recorded date	Distance from the site (km)	NSW Status	Federal Status
Mammals					
Cercartetus nanus	Eastern Pygmy-possum	NR	-	V	Not listed
Chalinolobus dwyeri	Large-eared Pied Bat	NR	-	V	V
Dasyurus maculatus	Spotted-tailed Quoll	NR	-	V	E
Miniopterus orianae oceanensis	Large Bent-winged Bat	2020	2.8km W	V	Not listed
Myotis macropus	Southern Myotis	NR	-	V	Not listed
Petauroides volans	Greater Glider	NR	-	Not listed	V
Petaurus australis	Yellow-bellied Glider	NR	-	V	Not listed
Petaurus norfolcensis	Squirrel Glider	2016	4km N	V	Not listed
Phascogale tapoatafa	Brush-tailed Phascogale	NR	-	V	Not listed
Phascolarctos cinereus	Koala	2014	3.2km N[1]	V	V
Pteropus poliocephalus	Grey-headed Flying-fox	2019	1.1km NE	V	V
Saccolaimus flaviventris	Yellow Bellied Sheath-tail Bat	NR	-	V	Not listed
Avifauna					
Anthochaera phrygia	Regent Honeyeater	NR	-	E4A	CE
Artamus cyanopterus cyanopterus	Dusky Woodswallow	2008	3.2km SW	V	Not listed
Botaurus poiciloptilus	Australasian Bittern	NR	-	E1	E
Burhinus grallarius	Bush Stone-curlew	NR	-	E1	Not listed
Callocephalon fimbriatum	Gang-gang Cockatoo	NR	-	V	Not listed
Calyptorhynchus lathami	Glossy Black Cockatoo	NR	-	V	Not listed
Certhionyx variegatus	Pied Honeyeater	2002	2.5km W	V	Not listed
Chthonicola sagittata	Speckled Warbler	1990	1km NW	V	Not listed
Circus assimilis	Spotted Harrier	NR	-	V	Not listed
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	2007	3.2km N	V	Not listed
Daphoenositta chrysoptera	Varied Sittella	1993	0.5km W	V	Not listed
Epthianura albifrons	White fronted Chat	NR	-	V	Not listed
Falco subniger	Black Falcon	NR	-	V	Not listed
Glossopsitta pusilla	Little Lorikeet	1993	0.6km W	V	Not listed
Grantiella picta	Painted Honeyeater	NR	-	V	V
Haliaeetus leucogaster	White-bellied Sea-Eagle	NR	-	V	Not listed
Hieraaetus morphnoides	Little Eagle	1994	0.5km W	V	Not listed
Lathamus discolour	Swift Parrot	NR	-	E1	CE
Limosa limosa	Black-tailed Godwit	NR	-	V	Not listed
Lophoictinia isura	Square Tailed Kite	NR	-	V	Not listed

Melanodryas cucullata cucullata	Hooded Robin (south eastern form)	NR	-	V	Not listed
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	NR	-	V	Not listed
Neophema pulchella	Turquoise Parrot	NR	-	V	Not listed
Ninox connivens	Barking Owl	2018	4.9km E	V	Not listed
Ninox strenua	Powerful Owl	NR	-	V	Not listed
Oxyura australis	Blue-billed Duck	1991	4km E[3]	V	Not listed
Petroica boodang	Scarlet Robin	2017	0.5km E	V	Not listed
Petroica phoenicea	Flame Robin	1994	0.8km W	V	Not listed
Polytelis swainsonii	Superb Parrot	2017	3km N	V	V
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	NR	-	V	Not listed
Rostratula australis	Australian Painted Snipe	NR	-	E1	E
Stagonopleura guttata	Diamond Firetail	1987	0.9km W	V	Not listed
Stictonetta naevosa	Freckled Duck	NR	-	V	Not listed
Amphibia					
Litoria booroolongensis	Booroolong Frog	NR	-	E1	E
Litoria castanea	Yellow-spotted Tree Frog	NR	-	E4A	E
Reptilia					
Aprasia parapulchella	Pink-tailed Legless Lizard	NR	-	V	V
Varanus rosenbergi	Rosenberg's Goanna	NR	-	V	Not listed
Flora					
Acacia meiantha	Wattle	NR	-	E1	E
Eucalyptus aggregata	Black Gum	2022	3.5km S	V	V
Eucalyptus canobolensis	Silver-leaf Candlebark	1963	2km E[3]	V	E
Eucalyptus robertsonii subsp. hemisphaerica	Robertson's Peppermint	NR	-	V	V
Leucochrysum albicans	Hoary Sunray	NR	-	Not listed	E
Prostanthera gilesii	Mintbush	NR	-	E4A	Not Listed
Swainsona recta	Small Purple-pea	NR	-	E1	E
Swainsona sericea	Silky Swainson-pea	1926	4.5km NE[2]	V	Not listed
Community					
Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion	Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregions	NR	-	E4	Not listed
Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions	Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions	NR	-	E3	Not listed
Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions	*Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions*	NR	-	E4	Not listed
White Box Yellow Box Blakely's Red Gum Woodland	White Box Yellow Box Blakely's Red Gum Woodland	NR	-	E3	CE

[1] Species was recorded as roadkill with a location accuracy of 10km. The recorded sighting is in the main street of Orange and is not considered accurate. [2] Species was recorded in 1926. Location was recorded in what is now a residential area. Species is not considered to still exist at this location. [3] Species identified in the main street of Orange and is not considered accurate.

NSW Status - Legal status of a species according to the Biodiversity Conservation Act (2016)

E1 – Endangered E2 – Endangered population E3 – Endangered ecological community
E4 – Extinct E4A – Critically endangered E4B – Critically endangered ecological community
V – Vulnerable V2 – Vulnerable ecological community

Federal Status - Legal status of a species according to the Environment Protection and Biodiversity Conservation Act (1999)

CE – Critically endangered E – Endangered V – Vulnerable
E – Extinct

6.4 Impacts of the development on flora and fauna

A residential subdivision is proposed for the site. Development will include the creation of residential lots, access roads, installation of underground services, removal of degraded pine trees and

creation of a public recreation reserve. Vegetation across the subject site is dominated by modified grasslands and will be removed as part of site development works for road construction, installation of underground services and contouring. The total area of disturbance from the development works across the subject site is approximately 10ha.

Areas of native vegetation will require removal. Native vegetation on the subject site includes rush, herb and tussock grass species. Herb and tussock grass were identified as isolated vegetation in the horse holding yards and southern paddock. Rushes were identified as closed rushland on the banks of the two dams and natural drainage depression to the south, and as very sparse on the lower slopes to the west. The total area of native vegetation removal is approximately 0.82ha.

A slip lane will be constructed from Cargo Road at the existing access point to allow road users to access the residential area. Several cedar and oak tree species are located adjacent to the access point and will require removal. No native tree species were identified in the area of removal. The total area of disturbance from construction of a slip lane is approximately 750m^2.

All soil disturbance works on the site will be undertaken in accordance with a sediment and erosion control plan which will manage potential impacts on waterways from sediment. The controls to be implemented are expected to include retaining vegetation to reduce surface water velocity, use of surface diversion banks and revegetation of disturbed areas.

The Test of Significance under Section 7.3 of the *Biodiversity Conservation Act* (2016) for threatened and endangered species which inhabit or have potential to inhabit the subject site are presented in Appendix 2. EPBC Act considerations for listed vulnerable and endangered species are presented in Appendix 3. No threatened or endangered flora or fauna are expected to inhabit the subject site due to modification through historical orcharding and grazing land-use. Species with potential to occur on the site due to habitat features will not be impacted as these species are highly mobile. The development is not expected to have a significant impact on the long-term survival of threatened species and communities within the South Eastern Highlands Bioregion.

6.5 Biodiversity Offsets Scheme thresholds

6.5.1 Thresholds

Whether the amount of native vegetation being cleared exceeds a threshold area based on the minimum lot size associated with the property

The minimum lot size permitted for the site is 100 hectares (Orange LEP 2011). The development is permitted to clear up to 1ha. Native rush, herb and common tussock will be removed equating to approximately 0.82ha of native vegetation. The area to be cleared is less than the threshold for native vegetation clearing.

Whether the impacts occur on an area mapped on the Biodiversity Values map published by the Minister for the Environment

The site is not located within land with high biodiversity value as defined by clause 7.3(3) of the Biodiversity Conservation Regulation 2017 from a review of the biodiversity values map.

The test of significance indicates no significant impact
No significant impacts on threatened flora, fauna or communities were identified in the test of significance.

6.5.2 Requirement for Biodiversity Offset Scheme

The triggers for assessing if the Biodiversity Offset Scheme applies have not been exceeded and the Biodiversity Offset Scheme does not apply.

7. Conclusions

An assessment of the impacts of the subdivision was undertaken by site inspection and desktop study.

The subject site comprises predominantly introduced pasture grasses and broadleaved weeds with minor native grasses, herbs and rushes. Isolated stands of fruit trees and conifer wind breaks exist on-site. Vegetation has been extensively modified through historical practices associated with apple orcharding from the 1960's to 1990's, pasture improvement and livestock grazing. Current livestock grazing practices are expected to impact on the usage of the grassland by fauna. Grazing increases bare ground cover, reduces native vegetation cover and diversity, increases the risk of weed invasion and reduces foraging habitat and shelter for fauna derived from the grasslands. No threatened floral species were identified on the subject site.

Faunal habitat comprised limited nesting areas due to lack of significant trees and understorey. The conifer windbreak and apple trees may provide fauna that do not require hollows with nesting sites. Farm dams and tall grasses provide shelter and foraging habitat for fauna. Food sources include insects, berries, seeds, aquatic invertebrates and grazing fodder. No threatened fauna species were identified on the subject site.

An area of native rushes, tussock grass, and herb located at the natural drainage depression to the south, on the lower slopes to the west and at the horse yards will be removed to create residential lots and access roads. No other native vegetation will be removed.

No impacts on threatened species with potential to occur in the study area from the development were identified in the Biodiversity Conservation Act (2016) Test of Significance or EPBC Act considerations. The area to be cleared is less than the threshold for native vegetation clearing. The site is not located within land with high biodiversity value as defined by clause 7.3(3) of the Biodiversity Conservation Regulation 2017 from a review of the biodiversity values map. The proposed development does not trigger the Biodiversity Offset Scheme Thresholds.

The development is not expected to have a significant impact on the long-term survival of threatened species and communities in the South Eastern Highlands Bioregion.

8. Recommendations

The following actions are recommended:

- Avoid the introduction of additional introduced plants that may become weeds in adjacent areas.
- Implementation of erosion and sediment control plans prior to construction activities.

9. Limitations

The assessment was preliminary and did not include a detailed trapping or spotlighting program. The information presented is thought to be accurate however Envirowest Consulting Pty Ltd will not be responsible for any errors of omissions or the results of any actions taken on the basis of the information.

10. References

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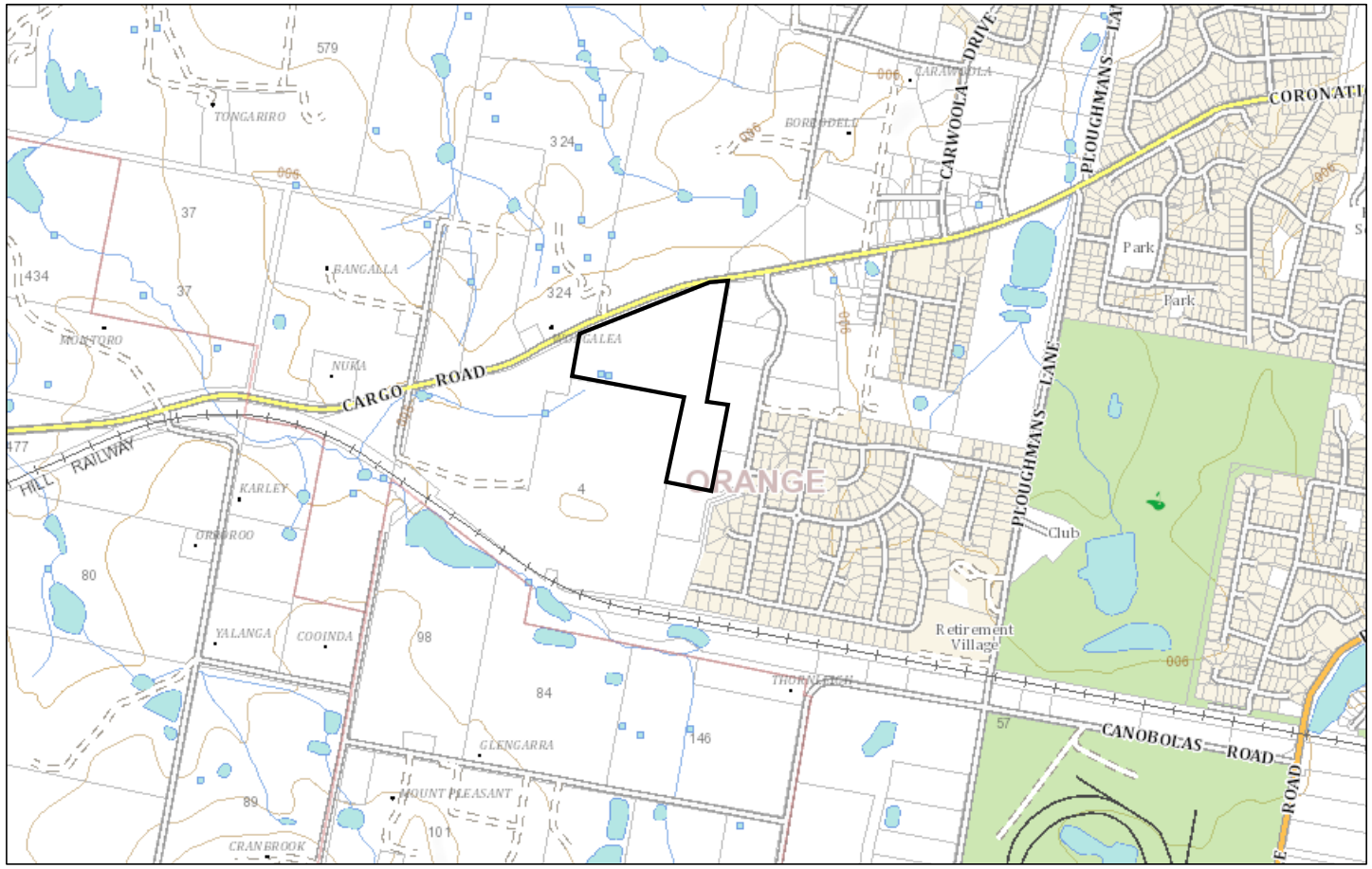
Figures

Figure 1. Subject site locality map
Figure 2. Aerial photograph of subject site
Figure 3. Proposed development plan
Figure 4. Native vegetation to be removed
Figure 5. Photographs of the subject site



Legend

Lot boundary

Figure 1. Site locality map		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156ff	Drawn by: EH	Date: 23/03/2023



Approximate Scale 1: 4,500

0 45 90 180

Legend

Subject site

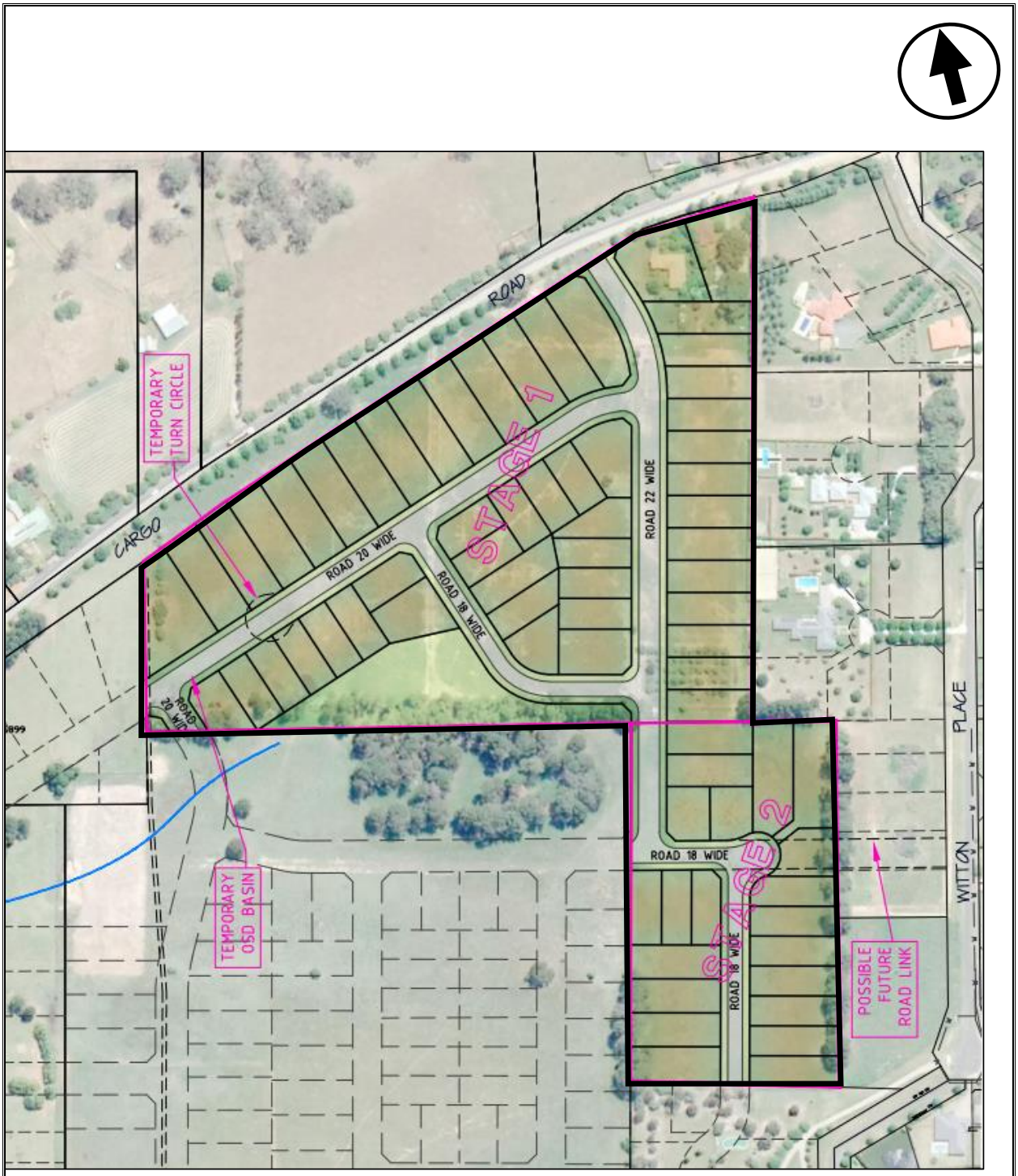
Study area

Figure 2. Aerial photograph of the subject site

277 Cargo Road, Orange NSW

Envirowest Consulting Pty Ltd

Job: R15156ff	Drawn by: EH	Date: 23/03/2023



Legend

Subject site boundary

Figure 3. Proposed development plan		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156ff	Drawn by: -	Date: 23/03/2023



Legend

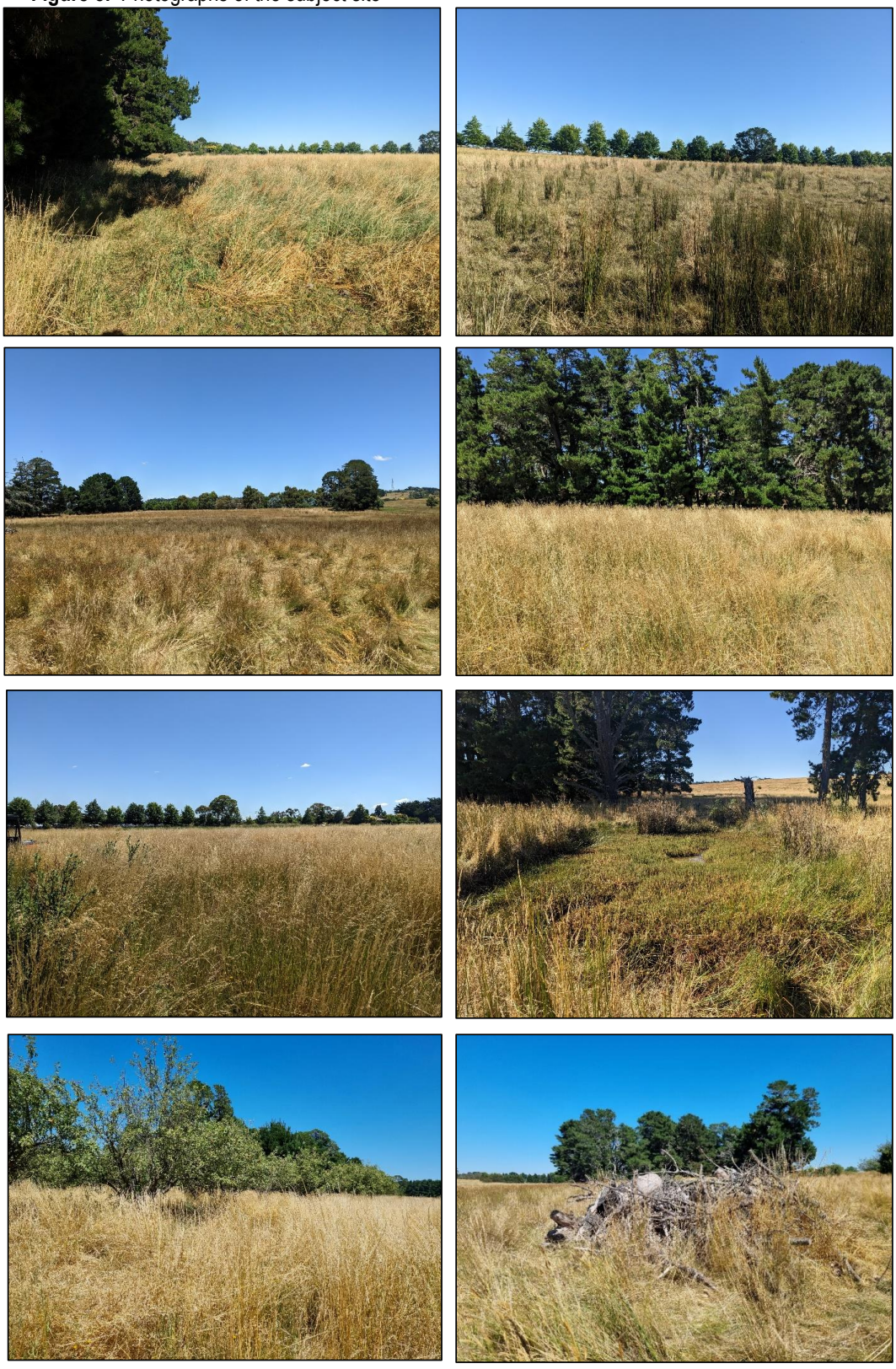
- Subject site
- Study area
- Closed rushland to be removed (>70% coverage in feature area)
- Very sparse rushland to be removed (<10% coverage in feature area)
- Isolated herb vegetation to be removed (singular plants)
- Isolated clumps of tussocks grass to be removed (<1% coverage in feature area)

Approximate Scale 1: 4,500

0 45 90 180m

Figure 4. Native vegetation to be removed		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156ff	Drawn by: EH	Date: 24/3/2023

Figure 5. Photographs of the subject site



Appendices

Appendix 1. Impacts of the proposal on flora, fauna and communities
Appendix 2. Test of Significance
Appendix 3. EPBC Act considerations

Impacts of the proposal on flora, fauna and communities

1. Species unlikely to be present

The preferred habitat and ecology of some species, identified as possibly present from the NSW Threatened Species website or have been identified within 5km of the subject site (Table 4) indicate they are unlikely to be present on the site. Some species can be reasonably excluded and do not require evaluation in the Assessment of Significance, "seven-part test" or EPBC Act considerations. The species excluded and the basis for this are presented in the table below. Reasons for exclusion are listed as habitat likely to be impacted on. Information provided within the table, is referenced from the OEH Threatened Species Profile for individual species or Ayers *et al.* (1996).

Species	TSC Act	EPBC Act	Occurrence	Habitat requirements	Presence of habitat	Likelihood of occurrence	Potential impact
Mammals							
Cercartetus nanus Eastern Pygmy-possum	V	Not listed	P	Eastern pygmy-possums inhabit rainforest to sclerophyll forests and woodland to heath. They feed on nectar and pollen from banksias, eucalypts and bottlebrushes, insects and soft fruits when there are no flowers. The eastern pygmy-possum shelters in tree hollows, rotten stumps, holes in the ground, abandoned bird-nests or thickets of vegetation.	Absent	Unlikely	No
Chalinolobus dwyeri Large-eared Pied Bat	V	V	P	Large-eared pied bats roost in caves, crevices in cliffs, old mine workings and in disused, bottle-shaped mud nests of the Fairy Martin. They inhabit well-timbered areas containing gullies. It is thought that the species probably forages for small, flying insects below the forest canopy.	Absent	Unlikely	No
Dasyurus maculatus Spotted-tailed Quoll	V	E	P	The spotted tailed quoll is recorded within a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. The spotted tailed quoll requires hollow-bearing trees, fallen logs, small caves, rock crevices, boulder fields and rocky-cliff faces within its range to be used as den sites. The spotted tailed quoll feeds on a variety of prey including gliders, possums, small wallabies, rats, birds, bandicoots, rabbits and insects. Rocks and boulder fields are important habitat features for the spotted tailed quoll.	Absent	Unlikely	No

Miniopterus orianae oceanensis Large Bent-wing-Bat	V	Not listed	P	Primarily roosts in caves but also uses derelict mines, stormwater tunnels, buildings and other man-made structures. Hunts in forested areas, catching moths and other flying insects above the treetops.	Absent	Unlikely	No
Myotis macropus Southern myotis	V	Not listed	P	Found along the coast and rarely more than 100km inland, except along major rivers. Generally, roost in groups of 10 to 15 close to water in caves, mine shafts, hollow bearing trees, stormwater channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish.	Absent	Unlikely	No
Petauroides volans Greater glider	Not listed	V	P	Inhabits mature eucalypt forests and woodlands. Typically found in higher abundance in taller montane, moist eucalypt forests with mature trees and abundant hollows.	Absent	Unlikely	No
Petaurus australis Yellow-bellied Glider	V	Not listed	P	Occur in tall mature eucalypt forests generally in areas with high rainfall and nutrient rich soils. Den in hollows of large trees.	Absent	Unlikely	No
Petaurus norfolcensis Squirrel Glider	V	Not listed	K	Inhabits mature or old growth Box, Box-Ironbark woodlands. Prefers mixed species stands with a shrub or Acacia mid-storey.	Absent	Unlikely	No
Phascogale tapoatafa Brush-tailed Phascogale	V	Not listed	P	Prefers dry sclerophyll open forest with sparse groundcover of herbs, grasses, shrubs or leaf litter. Also inhabit heath, swamps, rainforest and wet sclerophyll forest. Agile climber foraging preferentially in rough barked trees of 25cm DBH or greater. Nest and shelter in tree hollows.	Absent	Unlikely	No
Phascolarctos cinereus Koala	V	V	K	The koala is an arboreal mammal and is dependent on good tree coverage. Koalas mainly occur on the central and north coasts with some populations in the western region. They inhabit eucalypt woodlands and forests where acceptable food trees are present.	Absent	Unlikely	No
Pteropus poliocephalus Grey-headed Flying-fox	V	V	K	Grey headed flying foxes occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps. Roosting camps are generally located within 20km of a regular food source and are commonly found in gullies close to water. The grey headed flying fox feed on the pollen and nectar of native trees in particular eucalypts, melaleuca and banksia and fruits of rainforest trees and vines	Marginal	Unlikely	No

Saccolaimus flaviventris Yellow Bellied Sheath-tail Bat	V	Not listed	P	Yellow-bellied sheathtail-bats forage in most habitats for insects. They roost singly or in groups in tree hollows and buildings. In treeless areas they are known to utilise mammal burrows.	Marginal	Possible	Yes
Avifauna							
Anthochaera phrygia Regent Honeyeater	E4	CE	P	Most commonly found in box-ironbark woodlands and will also inhabit swamp mahogany forests and riverine she-oak woodlands. Remnant stands of timber, roadside reserves, travelling stock routes and street trees also provide habitat. The regent honeyeater mainly feeds on the nectar from a wide range of eucalypts and mistletoes. They also feed on fruit from mistletoe and insects. A shrubby understorey is an important source of insects and nesting material.	Marginal	Unlikely	No
Artamus cyanopterus cyanopterus Dusky Woodswallow	V	Not listed	K	Widespread in eastern, southern and southwestern Australia in woodlands and dry sclerophyll forest usually dominated by eucalypts. It is also recorded in shrublands and heathlands. Nesting occurs from late September to late February. The nest is an open shallow untidy cup frequently in an open hollow, crevice or stump. They eat invertebrates, mainly insects which are captured whilst hovering and sallying over the canopy or water.	Marginal	Unlikely	No
Botaurus poiciloptilus Australasian Bittern	E1	E	P	Favours permanent freshwater wetlands with tall, dense vegetation particularly bulrushes and spikerushes. Feeds mainly at night on frogs, fish, yabbies, spiders, insects and snails.	Absent	Unlikely	No
Burhinus grallarius Bush Stone-curlew	E1	Not listed	P	Inhabits open forest and woodlands with a sparse grassy groundlayer and fallen timber. Also inhabits open plains. It is largely nocturnal and especially active on moonlit nights. The bush stone-curlew feeds on insects and small vertebrates such as frogs, lizards and snakes. They form a nest on the ground in a scrape or small bare patch.	Marginal	Possible	Yes
Callocephalon fimbriatum Gang-gang Cockatoo	V	Not listed	P	In summer, generally found in tall mountain forests and woodlands particularly in heavily timbered and mature wet sclerophyll forests. In winter, may occur at lower altitudes in drier more open forests and woodlands particularly box-ironbark assemblages. Favours old growth attributes for nesting and roosting.	Absent	Unlikely	No

Calyptorhynchus lathami Glossy Black Cockatoo	V	Not listed	P	Inhabits open forest and woodlands with stands of sheoak species.	Absent	Unlikely	No
Certhionyx variegatus Pied Honeyeater	V	Not listed	P	The pied honeyeater is widespread throughout acacia, mallee and spinifex scrubs of arid and semi-arid Australia. They are highly nomadic, following the erratic flowering of shrubs. Acacia, mallee and spinifex scrub communities were not identified on the subject site.	Absent	Unlikely	No
Chthonicola sagittata Speckled Warbler	V	Not listed	P	Lives in a wide range of *Eucalyptus* dominated communities that have a grassy understorey. Typical habitat includes scattered native tussock grasses, a sparse shrub layer, some eucalypt regrowth and an open canopy. Large, relatively undisturbed remnants are required for the species to persist in an area.	Absent	Unlikely	No
Circus assimilis Spotted Harrier	V	Not listed	P	The Spotted Harrier is found in open wooded country in tropical and temperate Australia, particularly in arid and semi-arid areas. It hunts by day on ground birds, mice, rats, rabbits and lizards. The nest is built in trees in open or remnant woodland.	Absent	Unlikely	No
Climacteris picumnus victoriae Brown Treecreeper (eastern subspecies)	V	Not listed	K	Widespread within eastern Australia, occurring in eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range. They forage in trees and on the ground for insects, mostly ants. They also feed on nectar from Mugga Ironbark and paperbark, lizards and food scraps. The brown treecreeper nests in hollows of dead standing or live trees.	Marginal	Possible	Yes
Daphoenositta chrysoptera Varied Sittella	V	Not listed	K	Varied Sittella are found in eucalypt woodlands and forests. They prefer rough-barked trees like stringybarks and ironbarks or mature trees with hollows or dead branches. They feed mainly by gleaning on tree trunks or branches looking for insects. The nest is a deep open cup of bark and spiderweb.	Absent	Unlikely	No
Epthianura albifrons White fronted Chat	V	Not listed	P	Found mostly in temperate to arid climates and very rarely sub-tropical areas, it occupies foothills and lowlands up to 1000m above sea level. It occurs mostly in the southern half of NSW in damp open habitats along the coast and near waterways in the western part. Forages on bare or grassy ground in wetland areas.	Marginal	Possible	Yes

Falco subniger Black Falcon	V	Not listed	P	The black falcon is widely but sparsely distributed in NSW mostly occurring in inland regions. It inhabits woodland, shrubland and grassland in the arid and semi-arid zones, especially wooded watercourses and agricultural land with scattered remnant trees and is usually associated with streams and wetlands. The black falcon feeds mostly on other birds but also some small mammals.	Marginal	Unlikely	No
Glossopsitta pusilla Little Lorikeet	V	Not listed	P	The Little Lorikeet is found in dry, open eucalypt forests and woodlands. They forage in small flocks, feeding primarily on nectar and pollen in the tree canopy. On the Western Slopes and Tablelands, White Box and Yellow Box are particularly important food sources for pollen and nectar. The nest hollows are located at heights of between 2 and 15m in living smooth-barked eucalypts.	Absent	Unlikely	No
Grantiella picta Painted Honeyeater	V	V	P	Inhabits boree, brigalow and box-gum woodlands and box-ironbark forests. Specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Nest from spring to autumn in a small delicate nest hanging within the outer canopy of drooping eucalypts, she-oak, paperbark or mistletoes branches.	Marginal	Unlikely	No
Haliaeetus leucogaster White-bellied Sea Eagle	V	Not listed	P	The White-bellied Sea Eagle habitats are characterised by the presence of large areas of open water including rivers, swamps, lakes and the sea. Terrestrial habitat includes coastal dunes, tidal flats grassland, heathland, woodland and forest. In NSW it is widespread along the east coast, and all major rivers and waterways/ Breeding habitat consists of mature tall open forest, tall woodland and swamp sclerophyll forest.	Absent	Unlikely	No
Hieraaetus morphnoides Little Eagle	V	Not listed	P	The Little Eagle is seen over woodland and forested lands and open country extending into the arid zone. It tends to avoid rainforest and heavy forest. It searches for prey on the wind and from a high exposed perch. Prey includes rabbits, other live mammals and insects. They nest in mature living trees in open woodland or tree lined watercourses and rarely in isolated trees.	Marginal	Possible	Yes

Lathamus discolour Swift Parrot	E1	CE	P	Breeding in Tasmania and its nearby islands the swift parrot migrates to south-eastern Australia to feed during winter. Inhabiting winter flowering species such as Red Ironbark, Yellow Gum, White Box, Swamp Gum and Manna Gum that have an association with psyllid infestations.	Absent	Unlikely	No
Limosa limosa Black-tailed Godwit	V	Not listed	P	Primarily found along the coast, usually in sheltered bays, estuaries and lagoons with large intertidal mudflats and/or sandflats. This species also occurs inland on mudflats and in large muddy lakes and swamps where the water is less than 10cm deep. Forages for insects, crustaceans, molluscs, worms, larvae, spiders, fish eggs, frog eggs and tadpoles in soft mud or shallow water.	Absent	Unlikely	No
Lophoictinia isura Square Tailed Kite	V	Not listed	P	The square tailed kite ranges along coastal and subcoastal areas from south western to northern Australia. Scattered records in NSW indicate that the species is a regular resident in the north, north east and along the major west flowing river systems. The square tailed kite is found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses.	Marginal	Unlikely	No
Melanodryas cucullata cucullata Hooded Robin (south eastern form)	V	Not listed	P	Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee. The habitat needs to be structurally diverse with mature eucalypts, saplings, small shrubs and tall native grasses. The hooded robin feeds on insects. They nest in a tree fork or crevice using bark and grasses to form the nest.	Absent	Unlikely	No
Melithreptus gularis gularis Black-chinned Honeyeater (Eastern subspecies)	V	Not listed	P	Inhabits drier open forests or woodlands dominated by box and ironbark eucalypts. It also inhabits open forests of smooth-barked gums, stringybarks, ironbarks and tea-trees. The black-chinned honeyeater moves quickly from tree to tree, foraging rapidly along outer twigs, underside of branches and trunks, probing for insects. Nectar is taken from flowers and honeydew is gleaned from foliage. The nest is placed high in the crown of the tree and hidden by foliage.	Absent	Unlikely	No

Neophema pulchella Turquoise Parrot	V	Not listed	P	Extending from southern Queensland through to northern Victoria, from the coastal plains to the western slopes of the Great Dividing Range the turquoise parrot lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland. They prefer to feed in the shade of a tree and spends most of the day on the ground searching for the seeds of grasses and herbaceous plants. The turquoise parrot nests in tree hollows, logs or posts.	Marginal	Unlikely	No
Ninox connivens Barking Owl	V	Not listed	K	Inhabits eucalypt woodland, open forest, swamp woodlands and, especially in inland areas, timber along watercourses. Denser vegetation is used occasionally for roosting. The barking owl feeds on a variety of prey with invertebrates predominant for most of the years and birds and small mammals becoming important during breeding.	Marginal	Unlikely	No
Ninox strenua Powerful Owl	V	Not listed	P	Primarily distributed on coast, inhabits dense vegetation & old trees in sheltered gullies. The powerful owl inhabits a range of vegetation types from woodland and open sclerophyll forest to tall open wet forest and rainforest. It requires large tracts of forest or woodland but can occur in fragmented landscapes. Breeding and hunting is undertaken in open or closed sclerophyll forest or woodlands and occasionally hunts in open habitats.	Marginal	Unlikely	No
Oxyura australis Blue-billed Duck	V	Not listed	K	Prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation. Blue-billed ducks will feed by day far from the shore, particularly if dense cover is available in the central parts of the wetland.	Absent	Unlikely	No
Petroica boodang Scarlet Robin	V	Not listed	K	The Scarlet Robin lives in mature and regrowth eucalypt forest and woodlands. In autumn and winter, many Scarlet Robins live in open grassy woodland and grasslands or grazed paddocks with scattered trees. They forage insects and other invertebrates from low perches, fenceposts or on the ground. The nest is an open cup made of plant fibres and cobwebs and is built in the fork of a tree.	Present	Possible	Yes

Petroica phoenicea Flame Robin	V	Not listed	P	The Flame Robin breeds in upland tall moist eucalypt forests and woodlands and prefer clearings or areas with open understoreys. In winter, they migrate to drier more open habitats in the lowlands and live in dry forests, open woodlands and in pastures and native grasslands with or without scattered trees. They forage small invertebrates from low perches or take flying insects in the air.	Marginal	Possible	Yes
Polytelis swansonii Superb Parrot	V	V	K	Inhabits box-gum, box-cypress pine and boree woodlands and river red gum forest or woodland. On the South West Slopes nest trees can be in open Box-Gum Woodland or isolated paddock trees. The superb parrot may forage up to 10km from nesting sites, primarily in grassy box woodland. They feed in trees and understorey shrubs and on the ground and their diet consists mainly of grass seeds and herbaceous plants.	Marginal	Unlikely	No
Pomatostomus temporalis temporalis Grey-crowned Babbler (eastern subspecies)	V	Not listed	P	Inhabits open box-gum woodland on the slopes and box-cypress pine and open box woodlands on alluvial plains. Flight is laborious with birds hopping to the top of a tree and gliding down to the next. Birds are generally unable to cross large open areas. The grey-crowned babbler feeds on invertebrates.	Marginal	Unlikely	No
Rostratula australis Australian Painted Snipe	E1	E	P	Inhabits fringes of swamps, dams and marshy areas with a cover of grasses, lignum, low scrub or open timber. The nest is constructed on the ground amongst tall vegetation such as grasses and leaves.	Present	Possible	Yes
Stagonopleura guttata Diamond Firetail	V	E	K	It is found in grassy woodlands as well as open forest, mallee and natural temperate grassland. The diamond firetail feeds on the ground on ripe and partly ripe grass and herb seeds, green leaves and insects. Nests are globular structures built in either the shrubby understorey or higher up. They roost in dense shrubs or in smaller nests.	Present	Possible	Yes
Stictonetta naevosa Freckled Duck	V	Not listed	P	Prefers permanent freshwater swamps and creeks with heavy growth of Cumbungi, Lignum or Tea-tree. The freckled duck moves to more permanent waters such as lakes, reservoirs, farm dams and sewage ponds during drier times. They rest during the day and feed at dawn, dusk and night on algae, seeds and vegetative parts of aquatic grasses and rushes and small invertebrates.	Marginal	Unlikely	No

Amphibia							
Litoria booroolongensis Booroolong Frog	E1	E	P	Aquatic species inhabiting vegetation within or at the edges of permanent or ephemeral water with some fringing vegetation cover. The booroolong frog shelters under rocks or amongst vegetation near the ground on the stream edge.	Present	Possible	Yes
Litoria castanea Yellow-spotted Tree Frog	E4A	E	P	There is only a single known population of the Yellow-spotted Tree Frog which occurs on the Southern Tablelands. Historically, this species occurred in two separate highland ranges including the central highlands from Bathurst/Orange to Bombala. The Yellow-spotted Tree Frog requires large permanent ponds or slow flowing streams with plenty of emergent vegetation such as bulrushes.	Marginal	Unlikely	No
Reptilia							
Aprasia parapulchella Pink-tailed Legless Lizard	V	V	P	The pink-tailed legless lizard is only known from the Central and Southern Tablelands and the South Western Slopes. Inhabits sloping, open woodlands with predominantly native grassy groundlayers particularly those dominated by kangaroo grass. Sites are typically well-drained, with rocky outcrops or scattered, partially buried rocks.	Absent	Unlikely	No
Varanus rosenbergi Rosenberg's Goanna	V	Not listed	P	Occurs on the Sydney Sandstone in Wollemi National Park, in the Goulburn and ACT regions and near Cooma in the south. Found in heath, open forest and woodland. Associated with termites, the mounds of which this species nest in. Termite mounds are a critical habitat component. Feeds on carrion, birds, eggs, reptiles and small mammals. Shelters in hollow logs, rock crevices and in burrows.	Absent	Unlikely	No
Flora							
Acacia meiantha	E1	E	P	*Acacia meiantha* is an erect or sometimes straggling shrub to 1.5m. Three isolated populations occur within the Central Tablelands. The populations are found at Clarence, Mullions Range and Aarons Range. It occurs on different geologies and in different plant communities. At Mullions Range it occurs mainly in open eucalypt forest or woodland in association with *E. rossii, E. mannifera, E. dives* and *E. macrorhyncha* as well as *A. buxifolia, A. dealbata* and *A. gunnii* on gravelly clay or brown loamy soil in areas above 860m asl. *A. meiantha* was not identified on the site.	Marginal	Unlikely	No

Eucalyptus aggregata Black Gum	V	V	P	Black Gum occurs mainly in the wetter, cooler and higher parts of the Central and Southern Tablelands. They grow in the lowest parts of the landscape on alluvial soils on cold, poorly drained flats and hollows adjacent to creeks and small rivers, often grows with other cold-adapted eucalypts such as *E. pauciflora*, *E. viminalis*, *E. rubida*, *E. stellulata* and *E. ovata*.	Absent	Unlikely	No
Eucalyptus canobolensis Silver-leaf Candlebark	V	E	K	Known only from Mt Canobolas near Orange. Found predominantly between 1100-1300m. The species is more or less restricted to the Mt Canobolas State Recreation Area.	Absent	Unlikely	No
Eucalyptus robertsonii subsp. hemisphaerica Robertson's Peppermint	V	V	P	Found only in the central tablelands of NSW, east and south east of Bathurst and Orange. They are locally frequent in grassy or dry sclerophyll woodland or forest on lighter soils and often on granite. Associated vegetation includes mixed woodlands of *Eucalyptus piperita*, *E. goniocalyx*, *E. dalrympleana*, *E. dives, E. mannifera* and *E. rossii*. *E. robertsonii* was not identified on the site.	Marginal	Unlikely	No
Leucochrysum albicans var. tricolor Hoary Sunray	Not listed	E	P	Occurs in a wide variety of grassland, woodland and forest habitats, generally on relatively heavy soils. In NSW it currently occurs on the southern tablelands.	Marginal	Unlikely	No
Prostanthera gilesii	E4A	Not listed	P	Known only from Mount Canobolas State Conservation Area where it is known from two populations. One population occurs along a creek line in wet sclerophyll forest with deep basaltic clay loam on lower slopes. The second occurs in a steep rock crevice which is fed by seepage and the soil is likely to be formed from rock scree and detritus. Surrounding vegetation is heath. The species readily roots from layered stems and may be clonal suggesting genetic diversity is low.	Marginal	Unlikely	No
Swainsona recta Small Purple-pea	E1	E	P	Historically recorded from Carcoar, Culcairn and Wagga Wagga where it is now probably extinct. Populations still exist in the Queanbeyan and Wellington-Mudgee areas. Before European settlement it occurred in the grassy understorey of woodlands and open forests dominated by *Eucalyptus blakelyi*, *E. melliodora*, *E. rubida* and *E. goniocalyx*.	Marginal	Unlikely	No

Swainsona sericea Silky Swainson-pea	V	Not listed	K	Found in temperate grassland and snow gum woodland on the Monaro and box-gum woodland in the southern tablelands and southwest slopes. Sometimes found in association with cypress pines.	Marginal	Unlikely	No
Ecological communities							
Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion	E4	Not listed	P	Woodland with a sparse to very sparse tree layer dominated by *Eucalyptus pauciflora* either as a single species or with any of *Acacia melanoxylon*, *E. rubida*, *E. stellulata* and/or *E. viminalis*. Occurs in the Southern Tablelands of NSW occupying broad valley floors and slopes and low rises of moderately undulating tablelands.	Absent	Unlikely	No
Tablelands Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions	E3	Not listed	P	Dominated by an open canopy of species including *E. viminalis*, *E. radiata*, *E. dalrympleana* subsp. *dalrympleana* and *E. pauciflora*. Typically occurs on loam or clay soils associated with basalt or less commonly alluvium, fine grained sedimentary rocks, granites and similar substrates. Occurs at altitudes between 600m to 900m above sea level.	Absent	Unlikely	No
Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions	E4	Not listed	P	Woodland with a sparse to very sparse tree layer dominated by *Eucalyptus pauciflora* either as a single species or with *E. rubida*. Occurs in the Southern Tablelands of NSW occupying broad valley floors and slopes and low rises of moderately undulating Southern Tablelands.	Absent	Unlikely	No
White Box Yellow Box Blakely's Red Gum Woodland	E3	CE	K	Open woodland community in which the most obvious species are White Box, Yellow Box and/or Blakely's Red Gum. The NSW definition of this community differs from the federal definition. The woodland on the site does not comply with the Commonwealth definition.	Absent	Unlikely	No

Codes

Occurrence

Species known to occur were identified in the search area on the Bionet database or from field surveys. Predicted (P) species were identified from the Bionet database.

Presence of habitat

Present:	Potential or known suitable habitat features such as soil type, geology, moisture content, topography, aspect and/or altitude or presence of associated species/vegetation type.
Marginal:	Some suitable habitat features such as soil type, geology, moisture content, topography, aspect and/or altitude or presence of some associated species/vegetation type.
Absent:	No suitable resources/landscape/associated species present.

Likelihood of occurrence

None:	Species does not occur on the site.
Unlikely:	Species not likely to occur on the site.
Possible:	Species could occur and habitat may be suitable.
Present:	Species recorded on the site during site inspections.

Potential impact

No:	The development would not impact the species or habitat and no impact expected. No Assessment of Significance and/or EPBC Act considerations required.
Yes:	The development could impact the species and an Assessment of Significance and/or EPBC Act considerations has been undertaken.

Appendix 2. Test of significance

The test of significance was undertaken for the following species:

- *Anthochaera phrygia* Regent Honeyeater
- *Burhinus grallarius* Bush Stone-Curlew
- *Chthonicola sagittate* Speckled Warbler
- *Climacteris picumnus victoriae* Brown Treecreeper (eastern subspecies)
- *Epthianura albifrons* White Fronted Chat
- *Hieraaetus morphnoides* Little Eagle
- *Litoria booroolongensis* Booroolong Frog
- *Petroica boodang* Scarlet Robin
- *Petroica phoenicea* Flame Robin
- *Rostratula australis* Australian Painted Snipe
- *Saccolaimus flaviventris* Yellow Bellied Sheath-tail Bat
- *Stagonopleura guttata* Diamond Firetail

a. in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

The vegetation on the subject site is grassland with isolated stands of unmanaged apple trees, water tolerant vegetation and conifer trees as windbreaks. Threatened fauna with potential to occur on the subject site are highly mobile and expected to relocate to other areas in the study area. No threatened floral species were identified as potentially occurring on the site. No adverse impacts on the lifecycle or population size of threatened species is expected from the development.

b. in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:
(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or
(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

No endangered ecological communities identified on the site.

c. in relation to the habitat of a threatened species or ecological community:
(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and
(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and
(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,

All grassland vegetation within the subject site will be removed. A small area of grassland and confer wil be integrated into a public recreation reserve. The vegetation removal is not expected to fragment or isolate other areas of potential habitat. The habitat is not considered important to the long-term survival of threatened species. Threatened fauna with potential to occur on the subject site are highly mobile and expected to relocate to other areas in the study area.

d. whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly)

The subject site or study area is not located in a declared area of outstanding biodiversity value.

e. whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

Key threatening process (KTP)	Comment
Clearing of native vegetation	Minor native grasses, rushes and herbs will be removed as part of the development. The proportion removed is a small distribution of the native vegetation which occurs in the locality.
Invasion and establishment of exotic vines and scramblers	Exotic vines and scramblers are not currently managed within the study area and are established on the subject site. The development is not expected to increase this KTP.
Invasion of native plant communities by exotic perennial grasses	Exotic perennial grasses are already established on the subject sites. The development is not expected to increase this KTP.
Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants	Native plant and animal habitat on the subject site has been impacted by agricultural activities including tree clearing, apple orcharding, livestock grazing and pasture improvement. Ornamental garden plants are expected to be contained around individual dwellings.
Predation by the Feral Cat *Felis catus* (Linnaeus, 1758)	The risk of predation to native animals and birds by feral cats may increase as domestic cat numbers within the area may increase. The increase is not expected to be significant. Feral cats are not currently managed within the study area and were observed on the day of investigation; therefore, native animals and birds are presently at risk from predation.
Removal of dead wood and dead trees	Fallen radiata pine timber was identified on the site. The quantity of dead trees and dead wood to be removed is not considered significant. The development will increase the occurrence of dead tree and wood removal.

Other key threatening processes are not expected to increase as a result of the development.

Appendix 3. EPBC Act considerations

EPBC Act considerations were undertaken for the following species:

- *Stagonopleura guttata* Diamond Firetail
- *Rostratula australis* Australian Painted Snipe
- *Litoria booroolongensis* Booroolong Frog

a. Is the action likely to lead to a long-term decrease in the size of the population?

Potential habitat for the Diamond Firetail, Australian Painted Snipe and Booroolong Frog was identified on the subject site. The fauna may use trees for nesting, grasslands and farm dams as a food source and water tolerant vegetation as shelter. The habitat on-site has been modified as a result of current and historical agricultural activities. Grasslands were dominated by introduced grass species. Vegetation around dams is expected to be disturbed by livestock. The faunal species are highly mobile and expected to relocate to other areas in the study area in search of foraging habitat and shelter. The action is unlikely to lead to a long-term decrease in the size of the population of threatened and endangered species identified.

b. Is the action likely to reduce the area of occupancy of the species?

The Diamond Firetail may use the trees as substrate for nesting and the grasslands as a food source. The Booroolong Frog and Australian Painted Snipe may use vegetation around the dams onsite as foraging habitat for invertebrates and as shelter. The habitat on-site has been modified as a result of agricultural activities and the grassland on-site was dominated by exotic grass species. The species are highly mobile and expected to relocate to areas in the study area. The small amount of potential habitat to be removed is not expected to reduce the area of occupancy of threatened and endangered species identified.

c. Is the action likely to fragment existing populations into two or more populations?

Fauna may use the trees as substrate for nesting, the grasslands as a food source and dam vegetation as foraging habitat and shelter. The habitat on-site has been extensively modified as a result of current and historical agricultural activities and the grassland on-site was dominated by introduced grass species. The faunal species are highly mobile and expected to relocate to areas in the study area. Removal of the habitat is not expected to result in the threatened or endangered populations becoming fragmented.

d. Is the action likely to adversely affect habitat critical to the survival of the species?

The habitat on the subject site comprising predominant introduced pasture and weed species has not been identified as critical habitat. Trees on-site are introduced species. The small amount of native habitat to be removed is not expected to adversely impact on habitat critical to the survival of the identified threatened and endangered species.

e. Is the action likely to disrupt the breeding cycle of a population?

Threatened and endangered fauna with potential to occur on the subject site are highly mobile and expected to relocate to other areas in the study area. No threatened floral species were identified as potentially occurring on the site. No adverse impacts on the breeding cycle of threatened or endangered species is expected from the development.

f. Is the action likely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?

Habitat on the subject site comprises conifer and fruit trees and modified grassland dominated by introduced and invasive weed species. The habitat on-site was considered marginal and the small amount of habitat to be removed

is not expected to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the identified threatened and endangered species is likely to decline.

g. Is the action likely to result in invasive species that are harmful to a critically endangered, endangered or vulnerable species becoming established in the critically endangered, endangered or vulnerable species' habitat?

The development is adjacent an existing residential area. Invasive species such as feral cats, English ivy and blackberry bush were identified on the site and therefore presently pose a risk to native species. It is unlikely the development will lead to an increase in invasive species that are not already present and that will be harmful to threatened species.

h. Is the action likely to introduce disease that may cause the species to decline?

Introduction of diseases that may cause the species to decline is not likely to increase.

i. Is the action likely to interfere with the recovery of the species?

Habitat on the subject site comprises conifer and fruit trees and grassland dominated by introduced species. The small amount of habitat to be removed is not expected to interfere with the recovery of identified threatened and endangered species.

Preliminary contamination investigation

277 Cargo Road, Orange NSW



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Summary report

Background
A residential subdivision is proposed for 277 Cargo Road, Orange NSW. The site has an area of approximately 11ha. Historical land-use is grazing in the southern section of the site and orcharding in the remaining areas. An area of infrastructure comprising two dwellings and several sheds are located in the north eastern section of the site. The historical land-use has potential to result in contamination of the site.

A preliminary contamination assessment of the site is required to determine suitability for residential land-use.

Objectives of investigation
The objective of the investigation was to determine suitability of the site for the proposed land-use.

Scope
The scope was to identify past potentially contaminating activities, identify potential contamination types, discuss the site condition, provide an assessment of site contamination and assess the need for remediation or suitability for residential land-use. The scope of works included site inspection, review of available information, soil sampling and analysis.

Summary
The site is an agricultural property currently used for grazing of sheep and horses on the western outskirts of Orange. Inspections were made on 25 and 31 January and 2 February 2023. Historical land-use included grazing in the southern section and orcharding in the remaining areas of the site. Two dams are located on the site.

Infrastructure comprising four sheds and two dwellings are located in the north eastern section of the site. A fuel pump and associated underground fuel storage tank (UST) were identified in the north eastern section of the site.

Vegetation cover on the site was generally 100% dominated by pasture grasses and broad leaved weeds. Scattered apple trees occur across the site with a cluster of remnant orchard trees located in the central eastern section. Two areas of disturbed soils associated with stockpiles of foreign materials were identified in the central and north eastern sections of the site. Two dams are located in the south western section of the site.

Potential areas of environmental concern identified from the site inspection and historical review were:

- Agricultural land-use
- Horticultural land-use as an apple orchard
- Infrastructure in the north eastern section including four sheds (Sheds 1, 2, 3 and 4) and two dwellings (Dwellings 1 and 2). A pesticide mixing area was identified south of Shed 3
- UST and fuel pump located in the north eastern section of the site
- Dam sludge
- Two areas of disturbed vegetation associated with stockpiles
- Two animal shelters located in the southern section of the site

Soil samples were collected at a grid pattern on the orchard and farming area. Samples were collected from the 0-100mm and analysed for the contaminants of concern.

Samples from potential areas of environmental concern were collected in a judgemental sampling pattern from the 50-150mm and samples from the UST area were collected to depths up to 2.0m.

Contaminants of concern within the grazing and orcharding areas are heavy metals and organochlorine pesticides (OCP).

Contaminants of concern within the potential areas of environmental concern are heavy metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH) and organochlorine and organophosphorus pesticides (OC/OPP).

Contaminants of concern of samples from the dams are heavy metals and OC/OP pesticides.

The underground petrol storage system (UPSS) contaminants of concern are TRH and BTEXN.

The contaminated areas (AECs) identified across the site were:

- Hydrocarbon impacted soil in the areas of disturbed soil associated with stockpiles of foreign materials and sparse vegetation located in the central and north eastern sections of the site (AEC 1a and AEC 1b). The elevated levels were identified in samples collected from 50 to 150mm soil depth. The areas of impacted soil are estimated in 70m^2 and 50m^2 respectively and depths of up to 300mm.
- Hydrocarbon impacted soil from an area of discoloured soil located in the attached garage south of Shed 1 (AEC 2). The discolouration extends for about 1m^2 and to a depth of 200mm.
- Copper impacted soil at three locations in the pesticide mixing area at the rear of Shed 3 (AEC 3a). The contamination is up to 150mm deep.
- Zinc impacted soil at one location in the pesticide mixing area at the rear of the chemical storage shed - Shed 3 (AEC 3a). The contamination is up to 150mm deep.
- Hydrocarbon impacted soil in the northern section of Shed 3 (AEC 3b). The area is defined by surface staining and the location of the adjacent samples that were not impacted by high levels of hydrocarbons and estimated to be 200mm deep.

Suitability
The site requires remediation to be considered suitable for residential land-use.

Recommendations
Remediation of the areas of environmental concern (Table 11) is required to enable residential land-use and prevent environmental impacts. Remediation should be undertaken in accordance with a remediation action plan and will require a development application or notification to council.

A validation assessment should be undertaken to confirm effectiveness of remediation and that no residual contamination is detected after the completion of the works. The validation will determine suitability for residential land-use.

An unexpected finds procedure should be adopted for site development works.

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1. Introduction

A residential subdivision is proposed for 277 Cargo Road, Orange NSW. The site has an area of approximately 11ha. Historical land-use is grazing in the southern section of the site and orcharding in the remaining areas. An area of infrastructure comprising two dwellings and several sheds are located in the north eastern section of the site. The historical land-use has potential to result in contamination of the site.

A preliminary contamination assessment of the site is required to determine suitability for residential land-use.

2. Objectives

The objective of the investigation was to determine suitability of the site for the proposed land-use.

3. Scope of work

Envirowest Consulting Pty Ltd was commissioned by Fenlor Group Pty Limited to undertake a preliminary contamination investigation, in accordance with the contaminated land management planning guidelines, from the *Contaminated Land Management Act 1997* and the *SEPP (Hazards and Resilience)* of 277 Cargo Road, Orange NSW. The scope of works included site inspection, review of available information, soil sampling and analysis.

4. Site identification

Address	277 Cargo Road Orange NSW
Deposited plans	Lot A DP408148
Latitude and longitude	-33.29^{o} 149.06^{o}
Geographic coordinates	55H E691545m N6315075m
Client	Fenlor Group Pty Ltd
Owner	Celestina Maria Vardanega
Current occupier	Private tenant
Area	11ha
Local government area	Orange City Council
Current zoning	C3 – Environmental management RU1 – Primary production (Orange LEP 2011)
Trigger for investigation	Change in land-use
Locality map	Figure 1

5. Site history

5.1 Land-uses

Land-use of the site at the time of inspection was rural-residential including grazing of horses and sheep. Agricultural infrastructure is present in the north eastern section and includes two dwellings, four sheds and horse yards.

The historical land-use on the site is orcharding in the western, northern and central sections and grazing in the southern section.

5.2 Summary of council records

A planning certificate was obtained for Lot A DP408148, 277 Cargo Road, Orange NSW. Orange City Council has not received notice under the *Contaminated Land Management Act 1997* that the land is:

- significantly contaminated
- subject to a management order
- subject of an approved voluntary management proposal
- subject to an ongoing maintenance order
- subject to a site audit statement.

Review of the Section 10.7 certificate identified the site was not proclaimed to be a Mines Subsidence District.

Orange Local Environmental Plan (LEP 2011) has the site mapped as:

- Drinking water catchment
- Groundwater vulnerable
- Highly sensitive for terrestrial biodiversity

5.3 EPA databases

The site is not listed on the NSW EPA register of contaminated sites (21 March 2023) or sites notified to the EPA (8 March 2023).

No sites listed on NSW EPA register of contaminated sites or sites notified to the EPA have been identified within 1km of the site.

5.4 Safework NSW Storage of hazardous chemicals

A search of the SafeWork dangerous goods database was considered not necessary. One underground fuel storage tank was identified in the north eastern section of the site. No other tanks or use of fuel were identified from the searches and past land-uses.

5.5 POEO public register

The site is not listed on the NSW EPA POEO public register.

Sites listed on NSW EPA POEO public register have not been identified within 1km of the site.

5.6 Other government agency databases

The site is not listed on the following databases:

- National Liquid Fuel Facilities database
- The NSW Government PFAS Investigation Program
- Defence PFAS Investigation Program
- Defence PFAS Management Program
- Defence 3 Year Regional Contamination Investigation Program

- Airservices Australia National PFAS Management Program

No sites listed on government agency databases have been identified within 1km of the investigation area.

5.7 Sources of information

Site inspection 25 and 31 January and 2 February 2023 by Felipe Canavez of Envirowest Consulting Pty Ltd
NSW EPA records of public notices under the CLM Act 1997
Soil and geological maps
Historical aerial photographs (1964, 1973,1982, 1989, 1993, 1998, 2003, 2006, 2010, 2013, 2016, 2018, 2020, 2023) including NSW Government historical imagery, Google Earth and Nearmap
Orange LEP 2011

5.8 Review of historic aerial photographs, maps and plans

5.8.1 Aerial photographs

Year	Comment
1964	Land use on the northern and central sections of the site is orcharding. The southern section has been used for grazing. Sheds are visible in the northern section. No dwellings are evident within the property. Cargo Road is visible to north. Adjacent land-uses are grazing and orcharding.
1973	One dam is evident in the western section of the site.
1982	Two dwellings are evident in the north eastern section of the site.
1989	Additional sheds are evident south of the dwellings. Orchard coverage has reduced in the western section of the site.
1993	An additional dam is visible in the western section of the site.
1998	Tree coverage has been reduced on site indicating a reduction in the orcharding operations. A stockpile potentially containing foreign materials is visible in the central section of the site.
2003	Tree coverage has been reduced on site. Orcharding is restricted to the northern and central sections of the site. Western and southern sections of the site have been used for grazing.
2006	No changes evident on-site.
2010	Tree coverage has been reduced indicating orcharding operations have potentially ceased. A small remnant area of orcharding trees is visible in the central section of the site. Several stockpiles are visible on-site. Land-use is grazing.
2013	The site has been maintained by slashing. A horse yard is evident in the eastern section of the site.
2016	No changes evident on-site.
2018	Vegetation appears desiccated. Dams on-site are almost dry.
2020	No changes evident on-site.
2023	No changes evident on-site.

5.8.2 Topographic maps

The 1989 topographic map based in 1982 aerial imagery and field revision in 1987 depicts the site as two parts. Lot A comprises the central and northern sections and is depicted as an orchard and Pt. 95

comprising the southern section of the site is depicted as an area of scattered vegetation. Several buildings are depicted in the north eastern section of the site.

The current topographic map (Six Maps) depicts the northern section of the site as orchard with a dam in the western section. The southern section is depicted as vacant.

5.8.3 Historical parish maps

The site is situated in the parish of Orange, County of Wellington. Historical parish maps from 1897 to 1967 indicate the site comprises three portions. Portion 93 is owned by Mr W Burrows and Portions 94 and 95 are owned by Mr W Wylde.

5.8.4 Title search

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
14.02.1925 (1925 to 1936)	William Eslick (Orchardist) Sidney Augustus Eslick (Orchardist)	Volume 3695 Folios 227 & 228
06.11.1936 (1936 to 1951)	William Eslick (Orchardist) Christopher William Eslick (Orchardist)	Volume 3695 Folios 227 & 228
18.01.1951 (1951 to 1958)	Christopher William Eslick (Orchardist) (Transmission Application not investigated)	Volume 3695 Folios 227 & 228
13.06.1958 (1958 to 1958)	Reginald Allan Buckland (Orchardist) Guenevere Hazel Buckland (Married Woman)	Volume 3695 Folios 227 & 228
27.07.1958 (1958 to 2015)	Mario Vardanega (Orchardist)	Volume 3695 Folios 227 & 228 Then Volume 7686 Folio 188 Now A/408148
13.10.2015 (2015 to date)	# Celestina Maria Vardanega	A/408148

- current registered proprietor

5.9 Chronological list of site uses

Review of historical information suggests the site has a land-use history as mixed agriculture comprising orcharding in the central northern and western sections and grazing in the southern section of the lot until early 2000's. The orchard comprised apples, cherries and plums. The orchard operations ceased in the late 1990's and early 2000's.

Several sheds used for storage and packing of produce are evident in the north eastern section and two dwellings are evident from 1980's.

5.10 Heritage listings

The site is not listed on the following government heritage databases:

- Commonwealth Heritage List
- National Heritage List
- State Heritage Register
- Local Environmental Plan (Orange LEP 2011)

Several heritage items including homesteads and winery sheds are identified within 1km north, south and east of the site in the outskirts of Orange. The heritage items are not expected to have impacted on the contamination status of the site.

5.11 Buildings and infrastructure

Several buildings and structures are located in the north eastern section of the site comprising: two dwellings, four sheds, a horse yard a fuel pump and associated diesel underground storage tank (UST). The northern dwelling contained cement sheet walls and metal roof and the southern dwelling was brick with the roof comprising tiles. A septic tank was identified adjacent to the southern dwelling. The area adjacent to the dwellings located in the north eastern section of the site were inspected and no evidence of contamination was identified. An asbestos audit of the dwellings was not part of the scope of the works.

The eastern shed is the largest shed and used for fruit packing and farm machinery storage (Shed 1). The shed has corrugated metal walls and roof. Part of the walls in the northern section were timber and lined with wallpaper. Floor in the northern section was timber and floor in the southern section was earth. Pieces of vinyl lining material were identified on the timber floor section. Materials stored in the timber floor section included metals, timber, plastic, agricultural equipment and tools. A car was parked in the north western corner of the shed in a section of earth floor. Materials stored in the southern section included metal, timber and plastic materials and machinery including a lawnmower, trailer and a forklift. A dry white powder was identified on the floor and expected to be lime or fertiliser. A garage with earth floor was attached to the southern end of the shed and a tractor was being stored in the garage at the day of the inspection. Soil discolouration was identified under the tractor on the earth floor.

The western general storage shed (Shed 2) has corrugated metal walls and roof and part concrete floor. The shed was used for general storage of furniture and tools. The southern section of the shed was earth floor and used for storage of farming material, drums, a lawnmower and a tractor. Bottles of engine oil and coolant were identified in the southern section. Soil discolouration was identified in the southern section of the shed.

The chemicals storage shed (Shed 3) walls and roof are corrugated metal and the floor was earth. The shed was used for storage of crop pesticides and chemicals. During the inspection containers of paint, pesticides, wetting agents and fungicides were identified in the shed. Shed 3 contained a mixing area attached to the south comprising a corrugated metal roof and a water tank. The area was covered in grapevine. Floor in the mixing area was earth.

A small shed (Shed 4) was observed south of Shed 1 comprising corrugated metal walls and roof and earth floor. The shed was used for general storage of equipment including metal, plastic, a dog kennel and a ute canopy. No evidence of contamination was observed in Shed 4 during the inspection.

A fuel pump and associated UST were identified adjacent to Shed 2 to the east. The fuel pump was manual and the hose was damaged. The UST is expected to be diesel, with a 500 gallon capacity and buried to a depth of 1.8m. No surface staining was observed around the pump.

A water tank with a piece of cement sheet assumed to be asbestos was identified in the central section of the paddock.

The orchard was not irrigated. No irrigation water source was identified in the investigation.

The southern section of the site contained two sheds used as animal shelters. The shelters comprised corrugated metal walls and roof and earth floor. The eastern animal shelter was covered in blackberry.

Two stock dams are present in the western section of the site.

Farm fences are located across the site to divide the site into paddocks and horse yards.

5.12 Spills, losses or discharges
Soil discolouration potentially due to leaks and spills of fuels and fluids was observed in areas of Sheds 1 and 2 from machinery storage.

Damage on the fuel pump hose was identified during the inspection.

No records for spills or losses on the site were available. No records for discharges to land, water or air were available.

5.13 Relevant complaint history
None expected.

5.14 Previous investigations
None known.

5.15 Historical neighbouring land-use
North – Cargo Road, agricultural, grazing
South – Grazing, Great Western Railway, orchard
East – Rural, orchard, Witton Place, residential
West – Cargo Road, rural

Historical neighbouring land-uses are not expected to have impacted on the site.

5.16 Contaminant sources
Potential exists for contaminating activities to have been undertaken on site which may impact on the suitability for the proposed land-use. Orcharding and grazing land-uses may have resulted in application of pesticides in routine management of fruit trees and pastures. Fertilisers applied may contain heavy metal contaminants. Pesticide and fertiliser use is expected to be less in the grazing areas of the site compared with the orcharding areas. No bio solids are known to have been applied to the site.

Leaks and spill of oils and fuels potentially have occurred due to the storage of agricultural machinery in the shed areas and from the fuel pump and UST area. The fuel pump hose was damaged. Soil discolouration was observed in Sheds 1 and 2 from machinery storage.

Leaks and spill of chemicals potentially have occurred in Shed 3 and mixing area.

Storage of foreign material on-site was identified during the site inspection. Inert foreign materials comprising scrap metal, timber, plastic, drums and equipment were observed during the inspection in the north eastern section of the site. Inert foreign materials are considered an amenity issue. Potential contaminants associated with foreign materials are heavy metals and hydrocarbons.

Two areas of disturbed soil were identified in the central northern section of the site. Stockpiles containing timber, plastic, furniture, metal, coal, clothes and ash were observed in these areas. The stockpiles have been burnt and may potentially be contaminated with heavy metals and hydrocarbons.

Cement sheeting suspected to contain asbestos was used to cover a water tank located in the central section of the site. The material used as floor liner in the packing shed may potentially contain asbestos.

5.17 Contaminants of concern

Based on the orcharding and grazing land-use the contaminants of concern persistent in the soil are:

- Heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury)
- Organochlorine pesticides (OCP)
- Organochlorine and organophosphorus pesticides (OC/OPP)

Non-persistent contaminants of concern in the soil are:

- Synthetic pyrethroids
- Crop oils.

Based on the storage of foreign materials, fuels and pesticides the contaminants of concern are:

- Heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury)
- Total recoverable hydrocarbons (TRH)
- Benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN)
- Polycyclic aromatic hydrocarbons (PAH)
- Organochlorine and organophosphorus pesticides (OC/OPP)

Based on the presence of cement sheeting and floor lining material the contaminants of concern are:

- Asbestos

5.18 Integrity assessment

The site history was obtained from a site inspection and history review. The information is consistent with the current site condition and to the best of the assessor's knowledge is accurate.

6. Site condition and surrounding environment

6.1 Site inspection

The site was inspected by Felipe Canavez of Envirowest Consulting Pty Ltd on 25 and 31 January and 2 February 2023.

6.2 Land-use

The site current use is rural-residential including horse and sheep grazing. Two dwellings are located on-site. The northern dwelling appears vacant. Three sheds (1, 2 and 4) in the north eastern section are used for general storage of farm machinery and equipment. One shed (Shed 3) is used for storage of chemicals. Two sheds located in the southern section are used as animal shelters.

6.3 Current neighbouring land-use

North – Cargo Road, agricultural, grazing
South – Grazing, Great Western Railway, orchard
East – Large-lot residential, Witton Place, residential
West – Grazing, Cargo Road, rural

6.4 Surface cover and vegetation

Vegetation cover on the site was generally 100% dominated by pasture grasses included phalaris and clover. Broad leaved weeds were identified including thistle and Paterson's curse. Water-tolerant

vegetation including *Juncus* spp. was identified in wet areas around the dams. Scattered remnant apple trees occur across the site with a cluster of trees in the central eastern section of the site.

Two areas of disturbed soil were identified in the central section of the site.

6.5 Evidence of visible contamination

Soil discolouration was present in the sheds, including a potential residual lime or fertiliser stain in Shed 1, discolouration under a tractor in the garage at the rear of Shed 1 and next to the lawn mower in Shed 2.

Several chemical containers were observed in Shed 3 including paint, pesticides, wetting agents and fungicides including TOPAS and mancozeb.

Two areas of disturbed soil were identified in the central section of the site. Stockpiles containing timber, plastic, furniture, metal, coal, clothes and ash were observed in these areas. The stockpiles have been burnt.

Cement sheeting suspected to contain asbestos was used to cover a water tank located in the central section of the site. The material used as floor liner in the timber floor section of Shed 1 may potentially contain asbestos.

Foreign materials comprising scrap metal, timber, plastic, drums and equipment were observed within the sheds in the north eastern section of the site.

A car body was identified in the western section of the site.

No evidence of fill, sheep dips, mines or contaminating industrial activities was identified on the site.

No signs of settlement or subsidence was identified on the site.

6.6 Topography

The site morphology is an upper to mid-slope with gently inclined slopes to the west in the north western section and to the south east in the central and south eastern sections.

The southern section has the slopes inclined towards a drainage depression that traverses the central section in an approximate east-west direction.

Elevation is approximately 907 to 912 metres above sea level.

6.7 Soils and geology

The site is located within the Towac Soil Landscape. Soil in the Towac landscape consists of krasnozems and yellow podzolic/solodic soils. Parent material is *in situ* and colluvial-alluvial materials derived from basalt flows separated by layers of volcanic ash. Basalts are alkaline olivines, with trachytes and some shales and slates (eSPADE 2023).

Soils in the UST area comprised topsoil of brown sandy silt to 0.4m. Subsoils comprised dark reddish brown silty clay with trace gravel to 1.2m. Subsoil from 1.2m comprised dark red silty clays with medium plasticity to a depth of 2.0m.

6.8 Water

6.8.1 Surface water

Two dams are located on the site for use as stock watering. Surface water in the northern, central and western sections is expected to infiltrate or flow into the dams and off-site to the west. Surface water in the southern section is expected to flow to the drainage line located in the centre of the area and west.

Surface water infiltrates in the soil or flows off-site to a system of unnamed creeks and dams located to the west emptying in Molong Creek located approximately 1.7km west of the site.

6.8.2 Groundwater

No groundwater bores were identified on the site on the NSW Government Water NSW website (2023). Six registered groundwater bores are identified within 500m of the site on the NSW Government Water NSW website (2023). The bores are licenced for stock, domestic and irrigation. Water-bearing zones (WBZ) for bores which information is available was from 16m to 58m in silty clay, shale and basalt. Standing water level was from 8.6m.

No.	Date drilled	Location	SWL (m)	Use	Status
GW802690	22/08/2003	182m NE	10.0	Domestic	Supply Obtained
GW064525	1/11/1987	425m SW	8.6	Stock, domestic	Unknown
GW053937	1/09/1981	305m N	-	Irrigation	Unknown
GW802391	13/12/2004	289m NE	-	Stock, domestic	Supply Obtained
GW056843	1/01/1983	421m W	18.3	Stock, domestic	Unknown
GW803608	14/07/2008	405m NE	29.0	Stock, domestic	Supply Obtained

6.9 Evidence of possible naturally occurring contaminants

No natural sources of PAH were identified.

The site is not mapped as an acid sulphate soil risk (State Government of NSW and Department of Planning, Industry and Environment 1998).

The site is not mapped as a geological unit with asbestos potential (State Government of NSW and Department of Regional New South Wales 2015).

6.10 Environmentally sensitive features or habitats

The site is identified as a drinking water catchment, as an area of vulnerable groundwater and sensitive for biodiversity (Orange LEP 2011).

The Molong Creek is considered a moderately disturbed ecosystem due to urban and agricultural runoffs and is located approximately 1.7km west of the site.

No additional environmentally sensitive features or habitats are located on the development area.

6.11 Integrity assessment

The site history was obtained from a site inspection and history review. The information is consistent with the current site condition and to the best of the assessor's knowledge is accurate.

7. Conceptual site model

7.1 Contaminant sources

Potential exists for contaminating activities to have been undertaken on site which may impact on the suitability for the proposed land-use. The historic mixed agricultural land-use comprising grazing and

orcharding is expected to have resulted in application of pesticides, fertilisers and contaminating activities to the site.

Foreign materials and chemicals stored in the sheds and across the site may have resulted in the application of contaminants.

The areas of disturbed soils associated with stockpiles containing burnt and unburnt foreign materials may have resulted in the application of contaminants.

Cement sheeting and the vinyl material used as floor liner in Shed 1 potentially contain asbestos.

7.2 Contaminants of concern

Based on the orcharding and grazing land-use and site inspection the contaminants of concern are persistent pesticides in the grazing, orchard and dams areas:

- Heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury)
- Organochlorine and organophosphorus pesticides (OC/OPP)

Based on the storage of fluids, fuels and chemicals the contaminants of concern in the potential areas of environmental concern are:

- Heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury)
- Total recoverable hydrocarbons (TRH)
- Benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN)
- Polycyclic aromatic hydrocarbons (PAH)
- Organochlorine and organophosphorus pesticides (OC/OPP)

Based on the presence of cement sheeting and the floor lining material the contaminant of concern is:

- Asbestos

7.3 Potential receptors

The proposed land-use of the site is residential. The site has historically been used for mixed agriculture comprising orcharding and grazing.

Human receptors include:

- Residents (adults and children)
- Visitors
- Site workers
- Construction workers
- Intrusive maintenance workers

Ecological receptors include:

- Flora and fauna on the site and adjacent to the site
- Aquatic flora and fauna receptors off-site

7.4 Exposure pathways

Pathways for exposure to contaminants are:

- Dermal contact following soil disturbance
- Ingestion and inhalation after soil disturbance
- Surface water and sediment runoff into waterways
- Leaching of contaminants into the groundwater
- Direct contact of flora and fauna with the soil

7.5 Source receptor linkages

Potential source pathway receptor linkages are identified to enable evaluation of any adverse impact on human health or ecology.

The proposed land-use of the site is residential and human receptors to the investigation area are likely. Proposed users of the site may have a risk of exposure if contaminants are present and the soil is disturbed. Residents, visitors, construction workers and intrusive maintenance workers may potentially be receptors to soil contaminants through direct contact to soil which includes ingestion and dermal contact.

The contaminants of concern include volatiles. Inhalation may occur as a result of soil disturbance and dust production. Major soil disturbance before and after the development of the site is considered unlikely. Soil disturbance during construction and development of the site is expected to be accompanied by erosion control measures which will reduce the incidence of dust production.

Vegetation on the site may be potential receptors to soil contamination through direct uptake of contaminants.

The source receptor linkage to aquatic organisms and ecosystems is considered incomplete as the site is well vegetated and movement of sediments from the site is unlikely. During construction work it is expected that erosion control measures will be implemented and movement of sediment off site will be unlikely. Following development of the site it is expected that vegetation or hard surfaces will be re-established which will control sediment movement from the site. The nearest waterway to the site is the Molong Creek and it is not expected that contaminants from the site will be transported to aquatic receptors within the creek. The Molong Creek is considered to be a moderately disturbed ecosystem.

The site is mapped as a groundwater vulnerable area. Groundwater is not identified as a potential receptor to contamination as potential contamination occurs on the surface or depths up to 2.0m and groundwater is identified at depths greater than 8.0m. Clay subsoils restrict downward movement of potential contaminants.

Source/contaminants	Transport	Potential exposure pathways	Receptors
☒ Pesticides Heavy metals Organochlorine pesticides (OCP) Organophosphorous pesticides (OPP)	☐Wind ☐Sedimentation ☐Groundwater ☐Surface water ☐Volatilisation	☒Direct contact (ingestion and absorption) (human and environment) ☒Inhalation ☐Runoff ☐Leaching	☒Residents (adults and children) ☒Visitors (adults and children) ☒Construction workers ☒Intrusive maintenance workers ☒Vegetation ☐Aquatic receptors
☒ Fertilisers Heavy metals	☐Wind ☐Sedimentation ☐Groundwater ☐Surface water ☐Volatilisation	☒Direct contact (ingestion and absorption) (human and environment) ☒Inhalation ☐Runoff ☐Leaching	☒Residents (adults and children) ☒Visitors (adults and children) ☒Construction workers ☒Intrusive maintenance workers ☒Vegetation ☐Aquatic receptors
☒ Foreign materials Heavy metals Hydrocarbons OCP OPP Asbestos	☐Wind ☐Sedimentation ☐Groundwater ☐Surface water ☒Volatilisation	☒Direct contact (ingestion and absorption) (human and environment) ☒Inhalation ☐Runoff ☐Leaching	☒Residents (adults and children) ☒Visitors (adults and children) ☒Construction workers ☒Intrusive maintenance workers ☒Vegetation ☐Aquatic receptors

☒ Storage of fuels and chemicals (heavy metals, hydrocarbons, pesticides) Heavy metals Hydrocarbons OCP OPP	☐Wind ☐Sedimentation ☐Groundwater ☐Surface water ☒Volatilisation	☒Direct contact (ingestion and absorption) (human and environment) ☒Inhalation ☐Runoff ☐Leaching	☒Residents (adults and children) ☒Visitors (adults and children) ☒Construction workers ☒Intrusive maintenance workers ☒Vegetation ☐Aquatic receptors
☒ UST Hydrocarbons	☐Wind ☐Sedimentation ☐Groundwater ☐Surface water ☒Volatilisation	☒Direct contact (ingestion and absorption) (human and environment) ☒Inhalation ☐Runoff ☐Leaching	☒Residents (adults and children) ☒Visitors (adults and children) ☒Construction workers ☒Intrusive maintenance workers ☒Vegetation ☐Aquatic receptors

☒Potential, ☐unknown/unlikely

8. Data quality objectives (DQO)

8.1 State the problem

A residential development is proposed for the site. Land-use will change from agriculture to residential. The agricultural land-use may have resulted in application of pesticides, fertilisers and contaminating activities to the site.

8.2 Identify the decision

The proposed land-use is residential. The decision problem is, do the levels of potential contaminants exceed the assessment criteria.

8.3 Identify the inputs decision

Investigation of the site is required to identify any potential contaminants from historical land-use. The inputs include:

- Field observation of aesthetic impacts or visible contamination
- Soil samples from the investigation area

8.4 Define the boundaries of the study

The investigation area is 277 Cargo Road, Orange NSW.

8.5 Develop a decision rule

Data collected for the purpose of the contamination investigation must be sufficiently accurate to be representative. The accuracy will be assessed by determination of:

- Current and historical land-use to describe potential contamination sources
- Site setting, potential receptors and pathways
- Soil samples to characterise potential contamination and analysis at accredited laboratories.

The adopted criteria is suitability for residential land-use and includes the thresholds listed in Schedule B1 of the NEPM (1999) *Guideline on Investigation Levels for Soil and Groundwater*. The data must be sufficiently representative to identify the extent of contamination and if further sampling and analysis is needed to delineate the nature and extent of contamination.

The decision rule for the investigation are:

- If the contamination levels were less than the adopted levels are potential risks low and acceptable

- If the levels were equal or greater that the investigations levels will exceedances affect the suitability for the proposed land-use.

8.6 Specify acceptable limits on the decision errors

A decision error in the context of the decision rule would lead to either underestimation or over estimation of the risk level associated with the property. Decision errors include:

- Limitations in available site history information
- Constraints associated with the ability to access certain areas of a site
- Errors in the sampling plan
- Data quality including comparability, representativeness and accuracy for data collection and analysis
- Analytic data validation

Where sample analysis is undertaken the quality of the data collected was assessed on a range of factors including:

- Documentation and data completeness
- Reference to relevant guidance documents
- Consistency of methodology
- Data quality including comparability, representativeness and accuracy for data collection and analysis
- Analytical data validation
- The 95% upper confidence interval of average levels of samples collected is less than the threshold levels, the results are less than 250% of relevant thresholds and the standard deviation is less than 50% of the assessment criteria.

8.7 Optimize the design for obtaining data

The methodology present in Sections 9 and 10 presents a framework for the contamination investigation which has been designed to meet the scope objectives and the nominated DQO.

Optimisation of the data collection process was informed by a review of historical information and observations made at the time of site inspection. The sampling was used to inform the potential contamination status of the site. The scope of work was undertaken to a level of accuracy and confidence in the ASC NEPM (NEPC 1999).

Analytes included heavy metals, TRH (C6-C40), BTEXN, PAH, OCP, OPP and asbestos.

9. Sampling analysis plan and sampling methodology

9.1 Sampling strategy

9.1.1 Sampling design

Visual inspections were undertaken over the site for indicators of contamination.

A systematic sampling pattern was adopted for the site. Uniform management practices are expected to have occurred across the site.

A systematic sampling pattern was adopted to assess the UST.

A judgemental sampling pattern was adopted to assess potential areas of environmental concern.

A judgemental sampling pattern was adopted to assess dam sludge.

9.1.2 Sampling locations

Discrete soil samples were collected from the site on an approximate 30m grid pattern. A total of 122 discrete soil samples were collected from the general site and analysed for heavy metals. A total of 30 discrete samples were analysed for OCP.

Twenty one soil samples were collected from potential areas of environmental concern. Sampling locations at areas of environmental concern were selected based on the most likely location of contaminants.

Three soil samples were collected from the boreholes drilled around the UST location to a depth of 2.0m

Two sludge samples were collected from the dams.

One sample of the floor lining material in Shed 1 was collected for asbestos identification.

The sampling locations are described in Figures 3, 4 and 5.

9.1.3 Sampling density

The sampling density can detect a potential hot spot across the general site with a radius of 18m at a 95% level of confidence.

The sampling frequency is in accordance with the minimum recommended by EPA (2022).

The number of samples collected from areas of environmental concern are expected to be sufficient to enable preliminary assessment.

9.1.4 Sampling depth

Any heavy metals or persistent pesticides present are generally immobile and expected to be contained in the 0 to 100mm which was the target sampling depth as minimal soil disturbance has occurred.

Samples from potential areas of environmental concern were collected from the 50 to 150mm soil layer to enable assessment of volatile hydrocarbons. Potential contaminants are expected to originate from the soil surface.

Boreholes were drilled on the site to up to 2.0m to enable assessment of the UST. Samples were screened for VOC using a PID and collected from a depth of 2.0m, considered representative of the bottom of the tank.

9.2 Analytes

Discrete soil samples collected from the general site were evaluated for arsenic, cadmium, chromium, copper, lead, nickel, zinc, mercury and OCP. Heavy metals and OCP were identified as the contaminants of concern possibly present as a result of agricultural activities.
Discrete soil samples collected from areas of environmental concern were analysed for arsenic, cadmium, chromium, copper, lead, nickel, zinc, mercury, TRH (C6-C40), BTEXN, PAH, OCP and OPP (Table 1).

Samples collected from the UST were screened onsite for volatile organic compounds (VOC) with a MiniRae photoionization detector (PID) using the headspace method and analysed for TRH and BTEXN.

9.3 Sampling methods

9.3.1 General site and areas of environmental concern

Soil samples from the general site and areas of environmental concern were taken using a stainless steel hand spade. Soil was taken at each individual sampling location below the vegetative and detrital layer. Discrete soil samples were transferred directly to a solvent rinsed glass jar with a Teflon lid.

Boreholes were drilled with an EZIPROBE ute mounted drilling rig with solid auger and soil samples collected directly from the extracted soil core or auger tip. Soil samples were transferred directly to a solvent rinsed glass jar with a Teflon lid.

Tools were decontaminated between sampling locations to prevent cross contamination by: brushing to remove caked or encrusted material, rinsing with clean tap water and allowing to air dry or using a clean towel.

The sample log is presented in Appendix 2.

Table 1. Schedule of samples and analyses

Sample ID	Location	Depth (mm)	Analysis undertaken
CR1 to CR123	General site	0-100	Arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), Nickel (Ni), zinc (Zn), mercury (Hg), selected samples analysed for organochlorine pesticides (OCP)
SL1	Dam 1	0-100	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP and Organophosphorous pesticides (OPP)
SL2	Dam 2	0-100	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP, OPP
HS1	Car body	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, OCP, OPP mercury (Hg), total recoverable hydrocarbons (TRH (C6-C40)), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH)
HS2	Foreign materials - Stockpile 1	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS3	Western animal shelter	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS4	Foreign materials - Stockpile 2	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS5	Eastern animal shelter	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS6(100)	Pesticide mixing area	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS7(200)	Pesticide mixing area	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS8(100)	Pesticide mixing area	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS9(200)	Pesticide mixing area	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS10	Downslope of pesticide mixing area	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS11	Downslope of pesticide mixing area	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS12	Pesticide storage shed	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS13	Pesticide storage shed	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS14	Pesticide storage shed	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS15	Pesticide storage shed	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS16	Soil discolouration - general storage shed 2	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS17	General storage shed 2	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS18	Soil discolouration – attached garage - shed 1	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS19	Soil discolouration - shed 1	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS20	Garage - general storage shed 1	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
HS21	Fuel pump	50-150	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP
BH1(2000)	North of UST	50-150	TRH, BTEXN
BH2(2000)	East of UST	50-150	TRH, BTEXN
BH3(2000)	South of UST	50-150	TRH, BTEXN

10. Quality assurance and quality control

10.1 Sampling design

The sampling program is intended to provide data as to the presence and levels of contaminants.

Discrete soil samples were collected from the general site on a systematic grid pattern of approximately 30 metres. This sampling density will enable the detection of an area with an elevated concentration on a radius of 18m with a 95% confidence level.

The number of sampling locations is in accordance with the recommended density in the EPA sampling guidelines.

Boreholes were drilled around the UST location on a systematic pattern of 4 metres. This sampling density will enable the detection of an area with an elevated concentration on a radius of 2.4 metres across the site with a 95% confidence level. Boreholes were drilled to a depth of 2.0m, slightly below the depth of the bottom of the tank.

Sampling density of areas of environmental concern is expected to the sufficient to enable preliminary characterisation.

10.2 Field

The collection of samples was undertaken in accordance with accepted standard protocols (NEPC 1999).

All discrete samples were analysed for arsenic, cadmium, chromium, hexavalent chromium, copper, lead, nickel, zinc and mercury. Selected samples were analysed for OCP. Two samples were analysed for clay content, pH and cation exchange capacity (CEC). Discrete soil samples collected from areas of environmental concern were additionally analysed for heavy metals, OCP, OPP, TRH, BTEXN and PAH.

Samples collected from the UST were screened onsite for volatile organic compounds (VOC) with a MiniRae photoionization detector (PID) using the headspace method and analysed for TRH and BTEXN. Three boreholes were drilled to a depth of 2.0m adjacent to the tank location.

Sludge samples collected from the dam were analysed for heavy metals, OCP and OPP.

Sampling equipment was decontaminated between each sampling event. The appropriate storage conditions and duration were observed between sampling and analysis. A chain of custody form accompanied the samples to the laboratory (Appendix 3).

A single sampler was used to collect the samples using standard methods. Soil collected was a fresh sample from soil corer. After collection the samples were immediately placed in new glass sampling jars and placed in a cooler.

Nine duplicate samples were collected. No field blank, rinsate, trip blank or matrix spikes were submitted for analysis. Some samples from all batches did not contain contaminants which confirm the absence of cross contamination during transport and storage.

A field sampling log is presented in Appendix 2.

10.3 Laboratory

Chemical analysis was conducted by SGS Laboratories, Alexandria, which is NATA accredited for the tests undertaken. The laboratories have quality assurance and quality control programs in place, which include internal replication and analysis of spike samples and recoveries.

Method blanks, matrix duplicates and laboratory control samples were within acceptance criteria. The quality assurance and quality control report is presented together with the laboratory report as Appendix 3.

10.4 Data evaluation

The laboratory quality control report indicates the data variability is within acceptable industry limits. The data is considered representative and usable for the purposes of the investigation. Data quality indicators are presented in Appendix 1.

11. Assessment criteria

Soil criteria around the UST location was determined by measurement of volatile organic compounds (VOC) to determine the potential for volatile hydrocarbon contamination. These criteria have been developed based on experience to assist in the assessment of hydrocarbon contamination levels in soil. It is important to note these generalised criteria are only a guide and that the level of VOC varies with hydrocarbon type. Soil VOC generalised criteria are outlined in Table 2.

Table 2. Generalised soil VOC criteria

Volatile organic compounds (VOC)	Description
<20ppm	Negligible
20 to 60ppm	Low
60 to 300ppm	Moderate
>300ppm	Significant

The main reference for environmental site assessment in Australia is the ASC NEPM (NEPC 1999 rev 2013). This document includes criteria for use in evaluating potential risk to human health and ecosystems from chemical impacts, which are presented as generic investigation levels and screening levels appropriate to a Tier 1 risk-based assessment applicable for site assessment. The application of these investigation levels and screening levels is subject to a range of limitations, and their selection and use must be in the context of a conceptual site model (CSM) relating to the nature and distribution of impacts and potential exposure pathways.

The proposed land-use is residential and appropriate initial criteria are described in *Guideline on Investigation Levels for Soil and Groundwater* (NEPC 1999).

The criteria lists health investigation levels (HIL) for a range of land-uses. The appropriate initial comparison for the site is residential (HIL A).

The NEPC (1999) also provides health screening levels (HSL) for hydrocarbons in soil. The HSLs have been developed to be protective of human health for soil types, depths below surface and apply to exposure to hydrocarbons through the predominant vapour exposure pathway. The appropriate HSL for the site is listed in Table 5. TRH>16 have physical properties which make the TRH fractions non-volatiles and therefore these TRH fractions are not applicable for vapour intrusion.
Ecological investigation levels (EIL) have been developed for the protection of terrestrial ecosystems for selected metals and organic substances in the soil in the guideline (NEPC 1999). Ecological screening

levels (ESL) assess the risk to terrestrial ecosystems from petroleum hydrocarbons in the soil. The EILs and ESLs consider the properties of the soil and contaminants and the capacity of the local ecosystem to accommodate increases in contaminant levels.

Two samples were collected for assessment of cation exchange capacity (CEC), clay content and pH. The average result was adopted in the calculations for EIL (Table 3). The result indicates CEC of soils is 4.3meq/100g, clay content of 3.5%, pH value of 5.0. Organic carbon content for soils in the locality are typically 4% (eSPADE v2.2). The proposed land-use is residential. The contaminants have been identified in the soil for at least two years and are considered aged. The ASC NEPM EIL calculation spreadsheet was used to determine the EIL. Default values for ambient background concentrations were adopted.

Historical land-use on the southern paddock indicated a grazing land-use. The grazing land-use is not expected to have been impacted by the same or similar contaminating activities as the orcharding area and would not have been impacted by the same magnitude. EPA (2022) describes such areas are suitable for determining the ambient concentration of metals in soil. The average chromium, copper, nickel and zinc results for samples collected from the southern section have been adopted as the ambient background concentration (ABC) for these metals.

Management limits have been developed to assess petroleum hydrocarbons following evaluation of human health and ecological risks (NEPC 1999). Management limits are applicable as screening levels after consideration of relevant ESLs and HSLs. The appropriate management limit for the site is listed in Table 5.

Chromium is analysed as total chromium which is the sum of chromium (III) and chromium (VI). Chromium (VI) is a potential contaminant from industrial processes including ferrochrome production, electroplating, pigment production and tanning (WHO 1998). Chromium (VI) is reduced to chromium (III) when it comes into contact with organic matter in biota, soil and water. Chromium in the environment is present in the trivalent state (WHO 1998).

Asbestos screening levels for residential land-use is no visible asbestos on the surface. The threshold for bonded asbestos is 0.01% w/w of soil and 0.001% w/w soil for friable asbestos.

Table 3. Soil properties for EIL calculation

Analyte	pH	CEC	Clay (%)
CR44	4.9	4.6	3.0
CR109	5.0	3.9	4.0
Average	5.0	4.3	3.5

Table 4. EIL Calculation sheet, residential land-use

Analyte	Rationale	ABC (mg/kg)	EIL (mg/kg)
Arsenic	Generic	-	100
Chromium (III)	Clay content 3.5%	8.4	290
Copper	CEC 4.3meq/100g, pH 5.0, organic carbon 4%	17.1	95
Lead	Generic	-	1,100
Nickel	CEC 4.3meq/100g	2.4	25
Zinc	CEC 4.3meq/100g, pH 5.0	61.0	200
Naphthalene	Generic	-	170
DDT	Generic	-	180

ACL – added contaminant limit, ABC – ambient background concentration, EIL – Ecological investigation limit (ACL+ABC)

Table 5. Assessment criteria

Analyte	*HIL A*	*Residential HSL clay soil, 0m to <1m*	*Residential HSL clay soil, 1m to <2m*	*Residential EIL*	*Residential ESL fine soil*	*Management limits - Residential*
Arsenic	100	-	-	100	-	-
Cadmium	20	-	-	-	-	-
Chromium	100[1]	-	-	290[2]	-	-
Copper	6,000	-	-	95	-	-
Lead	300	-	-	1,100	-	-
Nickel	400	-	-	25	-	-
Zinc	7,400	-	-	200	-	-
Mercury	40	-	-	-	-	-
OCP	-	-	-	-	-	-
DD's	240	-	-	-	-	-
DDT	-	-	-	180	-	-
Endosulfan	270	-	-	-	-	-
F1 (TRH C6-10)	-	50	90	-	180	800
F2 (TRH C10-16)	-	280	NL	-	120	1,000
F3 (TRH C16-34)	-	-	-	-	1,300	3,500
F4 (TRH C34-40)	-	-	-	-	5,600	10,000
Benzene	-	0.7	1.0	-	65	-
Toluene	-	480	NL	-	105	-
Ethylbenzene	-	NL	NL	-	125	-
Xylenes	-	110	310	-	45	-
Naphthalene	-	5	NL	170	-	-
Benzo(a)pyrene	-	-	-	-	0.7	-
Carcinogenic PAH	3	-	-	-	-	-
PAH (Total)	300	-	-	-	-	-

HIL – health investigation levels, HSL – health screening level, EIL – ecological investigation levels, ESL – ecological screening level, NL – non limiting, NA – not applicable, [1] Threshold for Chromium (VI), [2] Threshold for Chromium (III)

12. Results and discussion

12.1 Site inspection

The site land-use is rural-residential comprising grazing of horses and sheep. The has been divided into paddocks with two dams located in the western section. The historical land-use is grazing in the southern section and orcharding in the remaining areas.

Vegetation was generally 100% dominated by pasture grasses and broad leaved weeds. Two areas of disturbed soil were identified in the central northern section associated with stockpiles containing timber, plastic, furniture, metal, coal, clothes and ash.

Shed 1 located in the eastern section of the site was historically used for fruit packing and machinery storage. A white powder was identified on the floor during the inspection and expected to be lime or fertiliser. A garage with earth floor containing a tractor was attached to the southern end of the shed. Discolouration was identified in the soil at the garage from historical oil leaks. Pieces of vinyl on the timber floor did not contain asbestos.

Shed 2 was used for storage of furniture and tools and had a concrete floor. The southern section was earth floor and used for storage of farming equipment, bottles of fluids, drums, a lawnmower and a small tractor. Soil discolouration was identified in the southern section of the shed. One underground fuel storage tank (UST) was identified east of Shed 2.

Shed 3 was historically used for chemicals storage with a mixing area attached. During the inspection paint, pesticides, wetting agents and fungicides were identified in the shed.

Shed 4 was located south of the packing shed comprising corrugated metal walls and roof and earth floor. Foreign materials were being stored at Shed 4 and no evidence of contamination was identified during the inspection.

A fuel pump and UST were identified east of Shed 2. The fuel pump hose was damaged. The fuel tank is expected to be diesel, with a 500 gallon capacity and buried to a depth of 1.8m.

A water tank with a piece of cement sheet with an estimated area of 0.5m^2 suspected to be asbestos was identified in the central section of the paddock.

The southern section of the site contained two animal shelters. The western animal shelter comprised corrugated metal walls and roof and earth floor. The eastern animal shelter comprised metal walls and roof and earth floor and was covered in blackberry. The shelters were vacant at the time of the inspection.

No evidence of fill, mines or contaminating industrial activities were identified at the site.

12.2 Analytical results

12.2.1 Orchard and grazing areas

Three soil samples (CR21, CR84 and CR107) exceeded the adopted EIL for copper (Appendix 5). The 95% UCL for soil copper levels was less than the adopted EIL (Table 6).

Three soil samples (CR114, CR116 and CR117) exceeded the adopted EIL for zinc (Appendix 5, Table A5.1). The 95% UCL for all zinc samples was less than the EIL (Table 6).

The 95% UCL for the other metals was less than the adopted thresholds (Table 6).

OCPs were generally not detected in the samples collected from the general site. DDs and DDT were detected in some samples at levels less than the adopted thresholds (Appendix 5). The 95% UCL for pesticides was less than the adopted threshold (Table 7).

Table 6. Summary of analytical results and threshold concentrations (general site) - heavy metals (mg/kg)

Sample ID	Arsenic	Cadmium	Chromium (total)	Copper	Lead	Nickel	Zinc	Mercury
Arithmetic mean	5.48	0.30	11.34	27.36	25.79	2.77	34.76	0.05
Standard deviation	9.77	0.05	5.42	22.66	39.98	1.43	67.08	0.00
Maximum	62.00	0.80	29.00	130.00	240.00	8.70	510.00	0.08
Median	2.00	0.30	9.90	22.00	11.00	2.30	18.00	0.05
Confidence interval	1.73	0.01	0.96	4.02	7.09	0.25	11.90	0.00
95% UCL	7.22	0.31	12.30	31.38	32.88	3.03	46.67	0.05
Number	122	122	122	122	122	122	122	122
Health Investigation Levels – Residential land-use threshold (NEPC 1999)								
	100	*20*	*100[1]*	*6,000*	*300*	*400*	*7,400*	*40*
Ecological Investigation Levels – Residential land-use threshold (NEPC 1999)								
	100	*-*	*290[2]*	*95*	*1,100*	*25*	*200*	*-*

[1] Threshold for Chromium (VI), [2] Threshold for Chromium (III)

Table 7. Summary of analytical results and threshold concentrations (general site) - Pesticides (mg/kg)

Sample ID	OCP	DDs	DDT
Arithmetic mean	1.00	0.13	0.10
Standard deviation	0.00	0.07	0.00
Maximum	1.00	0.03	0.10
Median	1.00	0.15	0.10
Confidence interval	0.00	0.03	0.00
95% UCL	1.00	0.15	0.10
Number	30	30	30
Health Investigation Levels – Residential land-use threshold (NEPC 1999)			
	-	*240*	-
Ecological Investigation Levels – Residential land-use threshold (NEPC 1999)			
	-	-	*180*

12.2.2 Areas of environmental concern

12.2.2.1 Sheds 1 and 2

Levels of zinc detected in the sample HS17 (210mg/kg) collected in the southern section of Shed 2 exceeded the adopted EIL (200mg/kg) (Table 8).

Levels of metals in the remaining samples collected around Sheds 1 and 2 were less than adopted thresholds (Table 8).

Low levels of OCP's below adopted thresholds were generally detected in samples collected from Sheds 1 and 2. Levels of OPP's were below the detection limit in Sheds 1 and 2 (Table 9).

Levels of TRH F2 (C10-C16) (400mg/kg) exceeding HSL (280mg/kg) and ESL (120mg/kg), levels of TRH F3 (C16-C34) (23,000mg/kg) exceeding the ESL (1,300 mg/kg) and management limits (3,500mg/kg) and levels of TRH F4 (>C34-C40) (7,300mg/kg) exceeding the EIL (5,600mg/kg) were identified in sample HS18 (Table 10). The sample was collected from the soil discolouration area potentially caused by leaks and spills of oil from machinery (Figure 7). The depth of the discoloured area is estimated to be 200mm deep.

Levels of TRH, BTEXN and PAH were below the detection limits and the adopted thresholds for the remaining samples analysed from Sheds 1 and 2 (Table 10).

The sample of vinyl used to line the timber floor in Shed 1 did not contain asbestos (Appendix 6).

12.2.2.2 Shed 3 – chemical storage and mixing areas

Levels of copper detected in the samples HS6(100) (98mg/kg) and HS8(100) (240mg/kg) from the pesticide mixing area and HS11 (140mg/kg) collected downslope of the mixing area exceeded the adopted EIL (95mg/kg). Levels of zinc exceeded the adopted EIL (200mg/kg) for sample HS8(100) (610mg/kg) (Table 8).

The levels of heavy metals for the remaining samples from Shed 3 were below the adopted thresholds (Table 8).

Low levels of OCP's were generally detected in samples from Shed 3, below the adopted thresholds. Levels of OPP's were below the detection limit for all samples (Table 9).

Levels of TRH F3 (C16-C34) (4,500mg/kg) exceeding ESL (1,300mg/kg) and management limits (3,500mg/kg) were identified in sample HS12 (Table 10) located in the northern section of the chemical storage shed (Figure 7).

Levels of TRH, BTEXN and PAH were below the detection limits and the adopted thresholds for the remaining samples from Shed 3 and mixing area (Table 10).

12.2.2.3 UST

Levels of zinc exceeded the adopted EIL (200mg/kg) for the sample HS21 (370mg/kg) collected below the fuel pump. The levels of the other metals were below the adopted thresholds (Table 8). Low levels of OCP's below the adopted thresholds were detected in sample HS21. Levels of OPP's were below the detection limit (Table 9). The exceedances are not from fuel tank activities.

Levels of TRH F3 (C16-C34) at 150mm exceeded the ESL in sample HS21 (1,500mg/kg) around the fuel pump (Table 10). No impact on vegetation was observed around the fuel pump from the levels of zinc and TRH. The exceedance was from leaks from the pump.

Levels of BTEXN and PAH were below the detection limits and the adopted thresholds for sample HS21 collected from around the base of the pump (Table 10).

The VOC screening values were considered negligible for samples from boreholes BH1, BH2 and BH3 collected from the boreholes across the UST. No odour of hydrocarbon was identified in the soil from the borehole locations. The drilling borelogs are presented in Appendix 7.

Levels of TRH and BTEXN were below the detection limits and the adopted thresholds for samples BH1, BH2 and BH3 collected from a depth of 2.0m across the UST location (Table 10).

12.2.2.4 Areas of disturbed soil and foreign material stockpiles

The levels of heavy metals were below the adopted thresholds for the samples from the disturbed soil areas (Table 8).

Low levels of OCP's below the detection limit and the adopted thresholds were detected in samples from the disturbed soil areas. Levels of OPP's were below the detection limit (Table 9).

Levels of TRH F3 (C16-C34) (19,000mg/kg) exceeding ESL (1,300mg/kg) and management limits (3,500mg/kg) and levels of TRH F4 (>C34-C40) (8,400mg/kg) exceeding ESL (5,600mg/kg) were identified in sample HS2 collected from soil adjacent to Stockpile 1. TRH F3 exceeding the ESL (1,300mg/kg) was identified in sample HS4 (1,800mg/kg) from soil adjacent to Stockpile 2 (Table 10).

Levels of benzo(a)pyrene and total PAH were detected in sample HS2 below the adopted thresholds.

Levels of BTEXN were below the detection limits and the adopted thresholds for samples from the disturbed soil area (Table 10).

12.2.2.5 Other areas of environmental concern

Low levels of heavy metals, pesticides and hydrocarbons were identified in the samples collected from the car body in the western section of the site and within the eastern and western animal shelters in the central section of the site. The levels of contaminants were below the adopted thresholds (Tables 8, 9 and 10).

The samples of sludge collected from the dams located in the western section of the site presented low levels of heavy metals and pesticides, below the health and ecological thresholds (Tables 8 and 9).

The area adjacent to the dwellings located in the north eastern section of the site were inspected and no evidence of contamination was identified. An asbestos audit of the dwellings was not part of the scope of the works. A septic tank was observed adjacent to the southern dwelling, any existing on-site waste treatment system should be decommissioned (Figure 2).

Table 8. Analytical results and threshold concentrations (areas of environmental concern) - heavy metals and PAH (mg/kg)

Sample ID	Location	Depth (mm)	Arsenic	Cadmium	Chromium (total)	Copper	Lead	Nickel	Zinc	Mercury	Carcinogenic benzo(a)pyrene	Total PAH
HS1	Car body	50-150	<1	<0.3	8.1	3.3	9	1.3	8.2	<0.05	<0.3	<0.8
HS2	Foreign materials stockpile 1	50-150	<1	<0.3	8.5	4.2	8	1.4	13	<0.05	0.4	1.8
HS3	Western animal shelter	50-150	<1	<0.3	6.9	4.0	7	1.3	10	<0.05	<0.3	<0.8
HS4	Foreign materials stockpile 2	50-150	<1	<0.3	6.9	3.0	7	1.1	7.4	<0.05	<0.3	<0.8
HS5	Eastern animal shelter	50-150	<1	<0.3	5.5	3.0	7	1.1	10	<0.05	<0.3	<0.8
HS6(100)	Pesticide mixing area – Shed 3	50-100	4	<0.3	34	**98**	51	5.6	170	<0.05	<0.3	<0.8
HS7(200)	Pesticide mixing area – Shed 3	100-200	4	<0.3	29	40	25	5.3	68	<0.05	<0.3	<0.8
HS8(100)	Pesticide mixing area – Shed 3	50-100	4	0.8	29	**240**	29	4.8	**610**	<0.05	<0.3	<0.8
HS9(200)	Pesticide mixing area – Shed 3	100-200	4	<0.3	19	78	20	5.1	63	<0.05	<0.3	<0.8
HS10	Downslope of pesticide mixing area – Shed 3	50-150	4	<0.3	33	52	16	5.8	120	<0.05	<0.3	<0.8
HS11	Downslope of pesticide mixing area – Shed 3	50-150	5	<0.3	31	**140**	20	4.5	55	<0.05	<0.3	<0.8
HS12	Pesticide storage – Shed 3	50-150	4	<0.3	46	42	27	7.3	110	<0.05	<0.3	<0.8
HS13	Pesticide storage – Shed 3	50-150	4	<0.3	31	30	18	19	46	<0.05	<0.3	<0.8
HS14	Pesticide storage – Shed 3	50-150	3	<0.3	24	72	20	4.5	78	<0.05	<0.3	<0.8
HS15	Pesticide storage – Shed 3	50-150	2	<0.3	14	21	100	3.6	120	0.05	<0.3	<0.8
HS16	Soil discolouration - general storage Shed 2	50-150	3	<0.3	33	28	22	5.2	83	<0.05	<0.3	<0.8
HS17	General storage Shed 2	50-150	2	0.5	11	20	110	3.9	**210**	0.27	<0.3	<0.8
HS18	Soil discolouration – attached garage - Shed 1	50-150	2	<0.3	11	68	9	2.1	77	0.05	<0.3	<0.8
HS19	Soil discolouration - Shed 1	50-150	3	<0.3	24	40	76	4.3	120	<0.05	<0.3	<0.8
HS20	Garage - general storage Shed 1	50-150	2	<0.3	20	27	16	9.2	100	<0.05	<0.3	<0.8
HS21	Fuel pump	50-150	5	<0.3	36	30	55	8.1	**370**	0.05	<0.3	<0.8
SL1	Western dam	0-100	4	<0.3	20	39	16	4.6	39	<0.05	-	-
SL2	Eastern dam	0-100	<1	<0.3	5.7	2.2	7	0.8	4	<0.05	-	-
Health Investigation Levels – Residential land-use threshold (NEPC 1999)												
			100	*20*	*100[1]*	*6,000*	*300*	*400*	*7,400*	*40*	*3*	*300*
Ecological Investigation Levels – Residential land-use threshold (NEPC 1999)												
			100	*-*	*290[2]*	*95*	*1,100*	*25*	*200*	*-*	*0.7*	*-*

[1] Threshold for Chromium (VI), [2] Threshold for Chromium (III)

Table 9. Analytical results and threshold concentrations (areas of environmental concern) - OCP (mg/kg)

Sample ID	Location	OCP	DDs	DDT	Endosulfan	Total OPP
HS1	Car body	<1	<0.1	<0.1	<0.2	<1.7
HS2	Foreign materials stockpile 1	<1	0.1	<0.1	<0.2	<1.7
HS3	Western animal shelter	<1	<0.1	<0.1	<0.2	<1.7
HS4	Foreign materials stockpile 2	<1	<0.1	<0.1	<0.2	<1.7
HS5	Eastern animal shelter	<1	<0.1	<0.1	<0.2	<1.7
HS6(100)	Pesticide mixing area	6	5.8	4.8	<0.2	<1.7
HS7(200)	Pesticide mixing area	1	1.2	0.8	<0.2	<1.7
HS8(100)	Pesticide mixing area	1	1.4	0.7	<0.2	<1.7
HS9(200)	Pesticide mixing area	<1	0.2	<0.1	<0.2	<1.7
HS10	Downslope of pesticide mixing area	<1	0.3	0.1	<0.2	<1.7
HS11	Downslope of pesticide mixing area	<1	<0.1	<0.1	<0.2	<1.7
HS12	Pesticide storage shed	4	3.6	2.7	0.3	<1.7
HS13	Pesticide storage shed	3	2.2	1.6	0.3	<1.7
HS14	Pesticide storage shed	6	5.7	4.1	0.8	<1.7
HS15	Pesticide storage shed	1	1.4	1.1	<0.2	<1.7
HS16	Soil discolouration - general storage shed 2	2	2.1	1.8	<0.2	<1.7
HS17	General storage shed 2	10	9.9	9.2	<0.2	<1.7
HS18	Soil discolouration - machinery storage area - shed 1	<1	<0.1	<0.1	<0.2	<1.7
HS19	Soil discolouration - shed 1	<1	0.3	0.3	<0.2	<1.7
HS20	Garage - general storage shed 1	<1	0.2	0.2	<0.2	<1.7
HS21	Fuel pump	<1	0.8	0.4	<0.2	<1.7
SL1	Western dam	<1	<0.1	<0.1	<0.2	<1.7
SL2	Eastern dam	<1	<0.1	<0.1	<0.2	<1.7
Health Investigation Levels – Residential land-use threshold (NEPC 1999)						
		-	240	-	270	-
Ecological Investigation Levels – Residential land-use threshold (NEPC 1999)						
		-	-	180	-	-

Table 10. Soil analysis results (areas of environmental concern) – hydrocarbons (mg/kg)

Sample I.D	Location	Depth (mm)	TRH F1 (C6-C10)	TRH F2 (C10-C16)	TRH F3 (C16-C34)	TRH F4 (C34-C40)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Benzo(a)pyrene
HS1	Car body	50-150	<25	<25	180	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS2	Foreign materials stockpile 1	50-150	<25	110	**19,000**	**8,400**	<0.1	<0.1	<0.1	<0.3	<0.1	0.2
HS3	Western animal shelter	50-150	<25	<25	<90	<120	0.2	<0.1	<0.1	<0.3	<0.1	<0.1
HS4	Foreign materials stockpile 2	50-150	<25	61	**1,800**	330	<0.1	<0.1	<0.1	<0.3	<0.1	0.1
HS5	Eastern animal shelter	50-150	<25	<25	240	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS6(100)	Pesticide mixing area	50-100	<25	<25	120	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS7(200)	Pesticide mixing area	100-200	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS8(100)	Pesticide mixing area	50-100	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS9(200)	Pesticide mixing area	100-200	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS10	Downslope of pesticide mixing area	50-150	<25	<25	120	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS11	Downslope of pesticide mixing area	50-150	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS12	Pesticide storage shed	50-150	<25	<25	**4,500**	1100	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS13	Pesticide storage shed	50-150	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS14	Pesticide storage shed	50-150	<25	<25	290	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS15	Pesticide storage shed	50-150	<25	31	230	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS16	Soil discolouration - general storage shed 2	50-150	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS17	General storage shed 2	50-150	<25	<25	170	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS18	Soil discolouration - machinery storage area - shed 1	50-150	<25	**400**	**23,000**	**7,300**	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS19	Soil discolouration - shed 1	50-150	<25	<25	380	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS20	Garage - general storage shed 1	50-150	<25	<25	520	450	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HS21	Fuel pump	50-150	<25	<25	**1,500**	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
BH1(2000)	North of UST	2000	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
BH2(2000)	East of UST	2000	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
BH3(2000)	South of UST	2000	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1
HSL – Residential clay soil												
		0 to <1m	*50*	*280*	*-*	*-*	*0.7*	*480*	*NL*	*110*	*5*	*-*
		1 to <2m	*280*	*NL*	*NL*	*NL*	*1.0*	*NL*	*NL*	*310*	*NL*	*-*
EIL – Residential												
			-	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*170*	*-*
ESL – Residential												
			180	*120*	*1,300*	*5,600*	*65*	*105*	*125*	*45*	*-*	*0.7*
Management limits – Residential												
			800	*1,000*	*3,500*	*10,000*	*-*	*-*	*-*	*-*	*-*	*-*

ND – not detected, NL – Not limiting, HIL – health investigation levels, HSL – health screening level, EIL – ecological investigation level, ESL – ecological screening level

13. Site characterisation

13.1 Environmental contamination

Contamination was identified in the following areas:

- AEC 1 comprises the two areas of disturbed soil associated with stockpiles of foreign materials and sparse vegetation located in the central and north eastern sections of the site (Figure 6):
    - AEC 1a Foreign materials Stockpile 1: Levels of TRH F3 exceeded the adopted ESL and management limits and TRH F4 exceeded the ESL in sample HS2 collected at a depth of 50 to 150mm from the disturbed soil area around the foreign material stockpile. The area of impacted soil is expected to be defined by the extension of disturbed soil, estimated to be 70m^2.
    - AEC 1b – Foreign materials in Stockpile 2: Levels of TRH F3 in sample HS4 collected at a depth of 50 to 150mm from the disturbed soil area north of the foreign materials stockpile exceeded the adopted ESL. The area of impacted soil is estimated to be 50m^2.
- The TRH in the foreign material stockpiles and adjacent soil is suspected to be from spills of hydrocarbon containing products and due to the burning events. The extent of the hydrocarbon impacted area is expected to be associated with the disturbed soil areas. Depth of impacted area has not been determined but estimated to be to 0.3m deep in both areas. Vegetation around the stockpiles was very sparse and appeared to be impacted by the hydrocarbon levels and burning events.
- AEC 2 – Attached garage of Shed 1 (Figure 7): Elevated levels of TRH F2 exceeding the HSL and ESL was identified in sample HS18 collected from an area of discoloured soil to a depth of 200mm. The TRH is expected to from spills or leaks of fuel and fluids from farm machinery. The discoloured area was approximately 1m^2 and the depth is approximately 200mm estimated on the day of the inspection.
- AEC 3a: Pesticide mixing area (Figure 7) - Levels of copper exceeding the EIL were identified in samples HS6(100), HS8(100) and HS11 located in the mixing area at the rear of Shed 3. Levels of zinc exceeding the EIL were identified in sample HS8(100). The copper and zinc levels are expected to be from leaching of the corrugated walls and from use of fungicides. The extension of the impacted area is expected to be delineated by the shed walls to north and samples HS8(100) and HS11 locations to south. The depth is estimated to be up to 150mm deep.
- AEC 3b: Shed 3 (Figure 7) - Elevated levels of TRH F3 exceeding the ESL and management limits was identified in sample HS12 collected from a depth of 150mm in the northern section of Shed 3. The TRH is expected to be from spills or leaks of hydrocarbon containing chemicals stored in the shed. The extent of the impacted area has not been determined but expected to be restricted to the northern section of the shed. The remaining samples collected in the shed did not contain TRH above the adopted thresholds. The depth is estimated to be up to 200mm deep. No ecological receptors are likely to access the site under the current land-use.

13.2 Chemical degradation production

Heavy metals and asbestos do not degrade.

Hydrocarbons will slowly degrade over time due to natural attenuation.

13.3 Exposed population

13.3.1 Human health

The asbestos is classified as non-friable and will be a health hazard to people accessing the site if disturbed.

Levels of hydrocarbons exceeding the HSL were detected in samples collected from the garage at the rear of Shed 1. Direct contact may affect sensitive receptors. The current land-use is rural-residential and access to the area by sensitive receptors should be restricted.

13.3.2 Ecological

Localised impacts on the environment may occur from the areas of environment concern containing copper and zinc.

Vegetation in the areas of disturbed soil was sparse and potentially impacted by levels of TRH and burning activities.

No other impacts on vegetation were identified at the remaining impacted areas. No ecological receptors were located within the shed locations.

The impacts are not expected to extend off-site or on groundwater.

14. Conclusions and recommendations

14.1 Summary

The site is an agricultural property currently used for grazing of sheep and horses on the western outskirts of Orange. Inspections were made on 25 and 31 January and 2 February 2023. Historical land-use included grazing in the southern section and orcharding in the remaining areas of the site. Two dams are located on the site.

Infrastructure comprising four sheds and two dwellings are located in the north eastern section of the site. A fuel pump and associated underground fuel storage tank (UST) were identified in the north eastern section of the site.

Vegetation cover on the site was generally 100% dominated by pasture grasses and broad leaved weeds. Scattered apple trees occur across the site with a cluster of remnant orchard trees located in the central eastern section. Two areas of disturbed soils associated with stockpiles of foreign materials were identified in the central and north eastern sections of the site. Two dams are located in the south western section of the site.

Potential areas of environmental concern identified from the site inspection and historical review were:

- Agricultural land-use
- Horticultural land-use as an apple orchard
- Infrastructure in the north eastern section including four sheds (Sheds 1, 2, 3 and 4) and two dwellings (Dwellings 1 and 2). A pesticide mixing area was identified south of Shed 3
- UST and fuel pump located in the north eastern section of the site
- Dam sludge
- Two areas of disturbed vegetation associated with stockpiles
- Two animal shelters located in the southern section of the site

Soil samples were collected at a grid pattern on the orchard and farming area. Samples were collected from the 0-100mm and analysed for the contaminants of concern.

Samples from potential areas of environmental concern were collected in a judgemental sampling pattern from the 50-150mm and samples from the UST area were collected to depths up to 2.0m.

Contaminants of concern within the grazing and orcharding areas are heavy metals and organochlorine pesticides (OCP).

Contaminants of concern within the potential areas of environmental concern are heavy metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH) and organochlorine and organophosphorus pesticides (OC/OPP).

Contaminants of concern of samples from the dams are heavy metals and OC/OP pesticides.

The underground petrol storage system (UPSS) contaminants of concern are TRH and BTEXN.

The contaminated areas (AECs) identified across the site were:

- Hydrocarbon impacted soil in the areas of disturbed soil associated with stockpiles of foreign materials and sparse vegetation located in the central and north eastern sections of the site (AEC 1a and AEC 1b). The elevated levels were identified in samples collected from 50 to 150mm soil depth. The areas of impacted soil are estimated in 70m^2 and 50m^2 respectively and depths of up to 300mm.
- Hydrocarbon impacted soil from an area of discoloured soil located in the attached garage south of Shed 1 (AEC 2). The discolouration extends for about 1m^2 and to a depth of 200mm.
- Copper impacted soil at three locations in the pesticide mixing area at the rear of Shed 3 (AEC 3a). The contamination is up to 150mm deep.
- Zinc impacted soil at one location in the pesticide mixing area at the rear of the chemical storage shed - Shed 3 (AEC 3a). The contamination is up to 150mm deep.
- Hydrocarbon impacted soil in the northern section of Shed 3 (AEC 3b). The area is defined by surface staining and the location of the adjacent samples that were not impacted by high levels of hydrocarbons and estimated to be 200mm deep.

14.2 Assumptions in reaching the conclusions

It is assumed the sampling sites are representative of the site. An accurate history has been obtained and typical past farming practices were adopted.

14.3 Extent of uncertainties

The analytical data relate only to the locations sampled. Soil conditions can vary both laterally and vertically and it cannot be excluded that unidentified contaminants may be present. The sampling density was designed to detect a 'hot spot' with a radius of approximately 18m and with a 95% level of confidence.

Soil beneath concrete slabs were not assessed.

14.4 Suitability for proposed use of the site

The site requires remediation to be considered suitable for residential land-use.

14.5 Limitations and constraints on the use of the site

Nil

14.6 Recommendation for further work

Remediation of the areas of environmental concern (Table 11) is required to enable residential land-use and prevent environmental impacts. Remediation should be undertaken in accordance with a remediation action plan and will require a development application or notification to council.

A validation assessment should be undertaken to confirm effectiveness of remediation and that no residual contamination is detected after the completion of the works. The validation will determine suitability for residential land-use.

Table 11. Summary of areas of environmental concern (AECs)

AEC	Contaminant	Location	Area impacted
1a	Total recoverable hydrocarbons (TRH)	Disturbed soil and foreign material stockpile 1 – sample HS2	Approximately 70m^2, estimated depth 300mm
1b	TRH	Disturbed soil and foreign material stockpile 2 – sample HS4	No Approximately 50m^2, estimated depth 300mm
2	TRH	Garage attached to Shed 1 – sample HS18	Approximately 1m^2, estimated depth 200mm
3a	Copper and zinc	Pesticide mixing area – samples HS6, HS8 and HS11	Approximately 45m^2, estimated depth 150mm
3b	TRH	Chemicals storage shed – sample HS12	Approximately 10m^2, estimated depth 200mm

An unexpected finds procedure should be adopted for site development works.

15. Report limitations and intellectual property

This report has been prepared for the use of the client to achieve the objectives given the clients requirements. The level of confidence of the conclusion reached is governed by the scope of the investigation and the availability and quality of existing data. Where limitations or uncertainties are known, they are identified in the report. No liability can be accepted for failure to identify conditions or issues which arise in the future and which could not reasonably have been predicted using the scope of the investigation and the information obtained.

The investigation identifies the actual subsurface conditions only at those points where samples are taken, when they are taken. Data derived through sampling and subsequent laboratory testing is interpreted by geologists, engineers or scientists who then render an opinion about overall subsurface conditions, the nature and extent of the contamination, its likely impact on the proposed development and appropriate remediation measures. Actual conditions may differ from those inferred to exist, because no professional, no matter how well qualified, and no sub-surface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock or time. The actual interface between materials may be far more gradual or abrupt than a report indicates. Actual conditions in areas not sampled may differ from predictions. It is thus important to understand the limitations of the investigation and recognise that we are not responsible for these limitations.

This report, including data contained and its findings and conclusions, remains the intellectual property of Envirowest Consulting Pty Ltd. A licence to use the report for the specific purpose identified is granted for the persons identified in that section after full payment for the services involved in preparation of the report. This report should not be used by persons or for purposes other than those stated and should not be reproduced without the permission of Envirowest Consulting Pty Ltd.

16. References

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EPA (2017) *Contaminated Sites: Guidelines for the NSW Site Auditors Scheme* (NSW Department of Environment and Conservation, Chatswood)

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State Government of NSW and Department of Regional New South Wales (2015) *Naturally occurring asbestos,* viewed September 2022 (datasets.seed.nsw.gov.au/dataset/naturally-occurring-asbestos)

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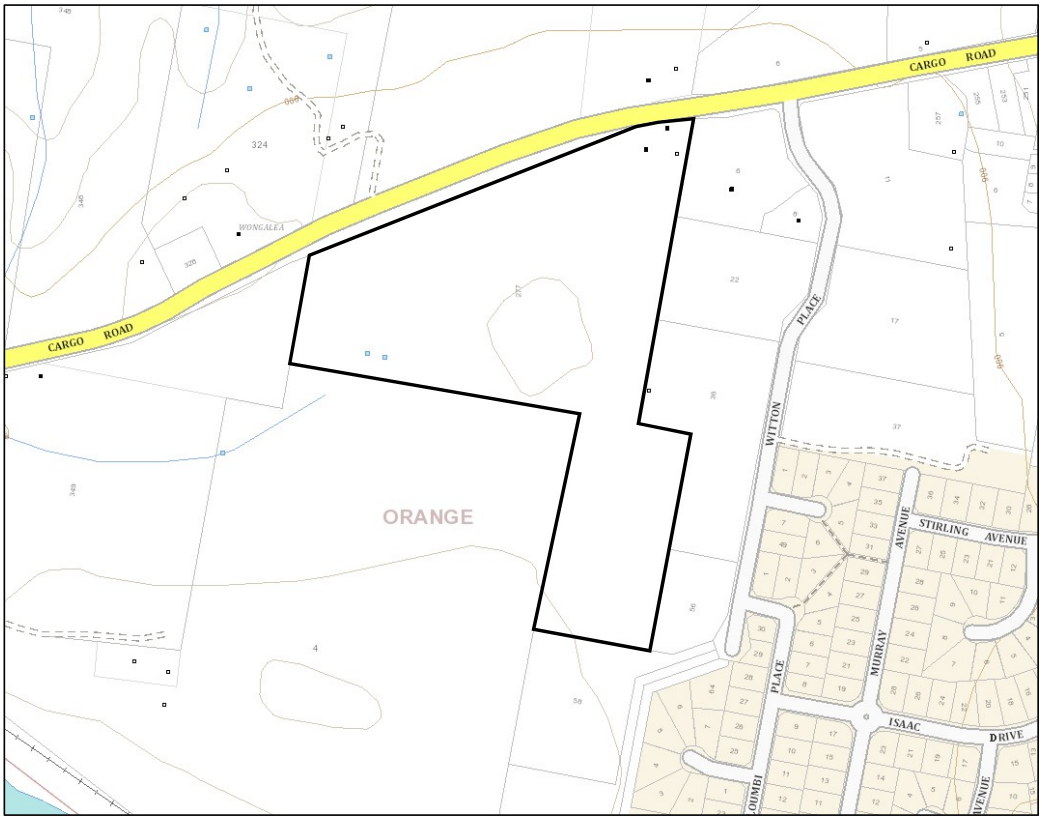
Figures



Legend

—— Investigation area

Figure 1. Site locality		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156c	Drawn by: FC	Date: 15/03/2023



Legend

- Investigation area
- Fence
- Slope
- Dam

Approximate Scale 1: 4,000

0 40 80 160m

Figure 2. Aerial image and site layout (2023)		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156c	Drawn by: FC	Date: 15/3/2023



Legend

—— Investigation area

⊗ Sampling location

Approximate Scale 1: 1,700

0 17 34 68m

Figure 3. General site sampling locations		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156c	Drawn by: FC	Date: 15/3/2023



Legend

- Investigation area
- ⊗ Sampling location
- Dam

Approximate Scale 1: 3,300

0 33 66 132m

Figure 4. Potential areas of environmental concern sampling locations		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156c	Drawn by: FC	Date: 15/3/2023



Legend

Investigation area

UST estimated location

Sampling location

Fence

Shed

Approximate Scale 1:500

0 5 10 20m

Figure 5. Potential areas of environmental concern – north eastern section

277 Cargo Road, Orange NSW

Envirowest Consulting Pty Ltd

Job: R15156c	Drawn by: FC	Date: 15/3/2023



Legend

- Investigation area
- ⊗ Sampling location
- Dam
- AEC extent (based on disturbed soil area)

Approximate Scale 1: 6,600

0 33 66 132m

Figure 6. Areas of environmental concern and exceedances		
277 Cargo Road, Orange NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156c	Drawn by: FC	Date: 27/3/2023



Legend

- Investigation area
- Sampling location
- Fence
- Shed
- UST estimated location
- AEC extent

Approximate Scale 1:500

0 5 10 20m

Figure 7. Areas of environmental concern and exceedances – north eastern section

277 Cargo Road, Orange NSW

Envirowest Consulting Pty Ltd

Job: R15156c	Drawn by: FC	Date: 27/3/2023

Figure 8. Photographs of the site


General site


General site


General site


General site


General site


General site



Car body



Foreign material stockpile 1



Foreign material stockpile 2



Eastern animal shelter



Septic tank



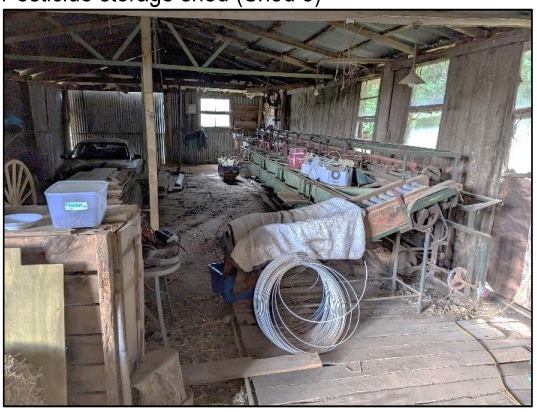
Pesticide mixing area



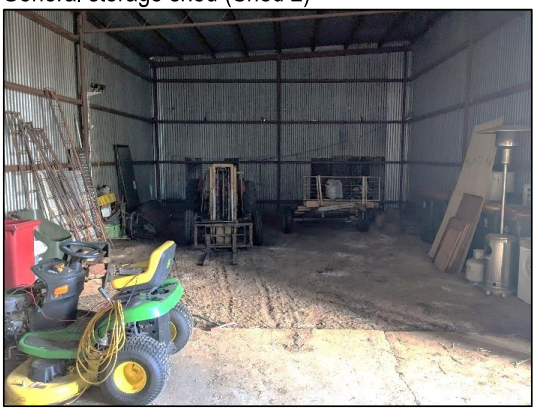
Pesticide storage shed (Shed 3)



General storage shed (Shed 2)



General storage shed/packhouse (Shed 1)



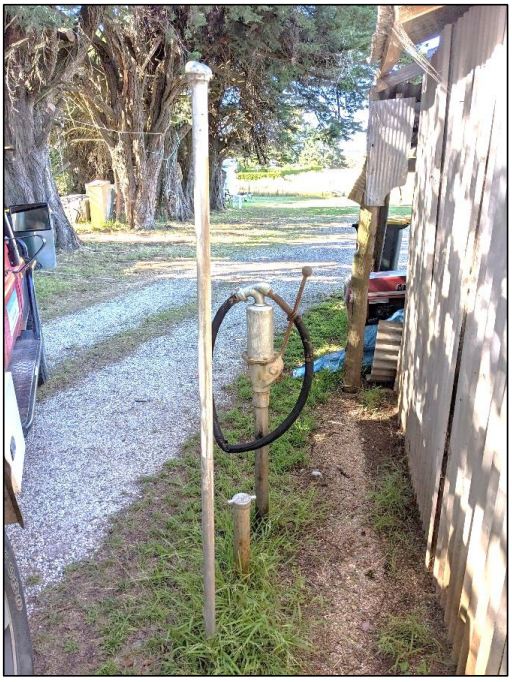
General storage shed (Shed 1)



Soil discolouration in Shed 1



Soil discolouration under tractor stored at the attached garage south of Shed 1



Fuel pump and vent



Kinks identified in the fuel pump hose



Cement sheeting on top of a water tank

Appendices

Appendix 1. Sample analysis, quality assurance and quality control (QAQC) report

1. Data quality indicators (DQI) requirements

1.1 Completeness

A measure of the amount of usable data for a data collection activity. Greater than 95% of the data must be reliable based on the quality objectives. Where greater than two quality objectives have less reliability than the acceptance criterion the data may be considered with uncertainty.

1.1.1 Field

Consideration	Requirement
Locations and depths to be sampled	Described in the sampling plan. The acceptance criterion is 95% data retrieved compared with proposed. Acceptance criterion is 100% in crucial areas.
SOP appropriate and compiled	Described in the sampling plan.
Experienced sampler	Sampler or supervisor
Documentation correct	Sampling log and chain of custody completed

1.1.2 Laboratory

Consideration	Requirement
Samples analysed	Number according to sampling and quality plan
Analytes	Number according to sampling and quality plan
Methods	EPA or other recognised methods with suitable PQL
Sample documentation	Complete including chain of custody and sample description
Sample holding times	Metals 6 months, OCP 14 days

1.2 Comparability

The confidence that data may be considered to be equivalent for each sampling and analytical event. The data must show little or no inconsistencies with results and field observations.

1.2.1 Field

Consideration	Requirement
SOP	Same sampling procedures to be used
Experienced sampler	Sampler or supervisor
Climatic conditions	Described as may influence results
Samples collected	Sample medium, size, preparation, storage, transport

1.2.2 Laboratory

Consideration	Requirement
Analytical methods	Same methods, approved methods
PQL	Same
Same laboratory	Justify if different
Same units	Justify if different

1.3 Representativeness

The confidence (expressed qualitatively) that data are representative of each media present on the site.

1.3.1 Field

Consideration	Requirement
Appropriate media sampled	Sampled according to sampling and quality plan or in accordance with the EPA (1995) sampling guidelines.
All media identified	Sampling media identified in the sampling and quality plan. Where surface water bodies on the site sampled.

1.3.2 Laboratory

Consideration	Requirement
Samples analysed	Blanks

1.4 Precision

A quantitative measure of the variability (or reproduced of the data). Is measured by standard deviation or relative percent difference (RPD). An RPD analysis is calculated and compared to the adopted criteria of 30%.

Data not conforming to the acceptance criterion will be examined for determination of suitability for the purpose of site characterisation.

1.4.1 Field

Consideration	Requirement
Field duplicates	Frequency of 5%, results to be within RPD or discussion required indicate the appropriateness of SOP

1.4.2 Laboratory

Consideration	Requirement
Laboratory and inter lab duplicates	Frequency of 5%, results to be within RPD or discussion required. Inter laboratory duplicates will be one sample per batch.
Field duplicates	Frequency of 5%, results to be within RPD or discussion required
Laboratory prepared volatile trip spikes	One per sampling batch, results to be within RPD or discussion required

1.5 Accuracy

A quantitative measure of the closeness of the reported data to the true value.

1.5.1 Field

Consideration	Requirement
SOP	Complied
Inter laboratory duplicates	Frequency of 5%. Analysis criterion 60% RPD for levels greater than 10 times the PQL 85% RPD for levels between 5 to 10 times the PQL 100% RPD at levels between 2 to 5 times the PQL Absolute difference, 3.5 times the PQL where levels are, 2 times PQL

1.5.2 Laboratory

Recovery data (surrogates, laboratory control samples and matrix spikes) data subject to the following control limits:

- 60-140% acceptable data
- 20-60% discussion required, may be considered acceptable
- 10-20% data should considered as estimates
- 10% data should be rejected

Consideration	Requirement
Field blanks	Frequency of 5%, <5 times the PQL, PQL may be adjusted
Rinsate blanks	Frequency of 5%, <5 times the PQL, PQL may be adjusted
Method blanks	Frequency of 5%, <5 times the PQL, PQL may be adjusted
Matrix spikes	Frequency of 5%, results to be within +/-40% or discussion required
Matrix duplicates	Sample injected with a known concentration of contaminants with tested. Frequency of 5%, results to be within +/-40% or discussion required
Surrogate spikes	QC monitoring spikes to be added to samples at the extraction process in the laboratory where applicable. Surrogates are closely related to the organic target analyte and not normally found in the natural environment. Frequency of 5%, results to be within +/-40% or discussion required
Laboratory control samples	Externally prepared reference material containing representative analytes under investigation. These will be undertaken at one per batch. It is to be within +/-40% or discussion required
Laboratory prepared spikes	Frequency of 5%, results to be within +/-40% or discussion required

2. Laboratory analysis summary

Four analysis batches were undertaken over the preliminary investigation program. Samples were collected on 25 and 31 January and 2 February 2022. A total of 148 samples were submitted for analytical testing. The samples were collected in the field by an environmental scientist from Envirowest Consulting Pty Ltd, placed into laboratory prepared receptacles as recommended in NEPM (1999). The samples preservation and storage was undertaken using standard industry practices. A chain of custody form accompanied transport of the samples to the laboratory.

The samples were analysed at the laboratories of SGS laboratories, Alexandria NSW which is National Association of Testing Authorities (NATA) accredited for the tests undertaken. The analyses undertaken, number of samples tested and methods are presented in the following tables:

Laboratory analysis schedule

Sample id.	Number of samples	Duplicate	Analyses	Date collected	Substrate	Laboratory report
CR1, CR2, CR3, CR4, CR5, CR6, CR7, CR8, CR9, CR10, CR11, CR12, CR13, CR14, CR15, CR16, CR17, CR18, CR19, CR20, CR21, CR22, CR23, CR24, CR25, CR26, CR27, CR28, CR29, CR30, CR31, CR32, CR33, CR34, CR35, CR36, CR37, CR38, CR39, CR40, CR41, CR42, CR43, CR44, CR45, CR46, CR47, CR48, CR49, CR50, CR51, CR52, CR53, CR54, CR55, CR56, CR57, CR58, CR59, CR60, CR61, CR62, CR63, CR64, CR65, CR66, CR67, CR68, CR69, CR70, CR71, CR72, CR73, CR74, CR75, CR76, CR77, CR78, CR79, CR80, CR81, CR82, CR83, CR84, CR85, CR86, CR87, CR88, CR89, CR90, CR91, CR92, CR93, CR94, CR95, CR96, CR97, CR98, CR99, CR100,	122	7	Arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni), zinc (Zn), mercury (Hg)	25/1/2023	Soil	SE242417 SE242417RE SE242420 SE242420RE

CR101, CR102, CR103, CR104, CR105, CR106, CR107, CR108, CR109. CR110, CR111, CR112, CR113, CR114, CR115, CR116, CR117, CR118, CR119, CR120, CR121, CR122						
CR4, CR8, CR12, CR16, CR20, CR24, CR28, CR32, CR36, CR40, CR44, CR48, CR52, CR56, CR60, CR64, CR68, CR72, CR76, CR80, CR84, CR88, CR92, CR96, CR100, CR104, CR108, CR112, CR116, CR120	30	0	Organochlorine pesticides (OCP)	25/1/2023	Soil	SE242417 SE242420
CR44, CR109	2	0	pH, cation exchange capacity, clay content	25/1/2023	Soil	CE164439 CE164440 SE242417 SE242420
HS1, HS2, HS3, HS4, HS5	5	0	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH)	25/1/2023	Soil	SE242420 SE242420A
SL1, SL2	2	0	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP and organophosphorous pesticides (OPP)	25/1/2023	Soil	SE242420 SE242420B
HS6(100), HS7(200), HS8(100), HS9(200), HS10, HS11, HS12, HS13, HS14, HS15, HS16, HS17, HS18, HS19, HS20, HS21	16	1	As, Cd, Cr, Cu, Pb, Ni, Zn, mercury (Hg), Total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH), OCP, OPP	31/1/2023 and 2/2/2023	Soil	SE242441 SE242583
BH1(2000), BH2(2000), BH3(2000)	3	1	TRH, BTEXN	2/2/2023	Soil	SE242583

Analytical methods

Analyte	Extraction	Laboratory methods
Metals	USEPA 200.2 Mod	APHA USEPA SW846-6010
Chromium (III)	-	APHA 3500 CR-A&B & 3120 and USEPA SW846-3060A
Chromium (VI)	USEPA SW846-3060A	USEPA SW846-3060A
Mercury	USEPA 200.2 Mod	APHA 3112
TRH(C6-C9)	USPEA SW846-5030A	USPEA SW 846-8260B
TRH(C10-C40), PAH	Tumbler extraction of solids	USEPA SW 846-8270B
PCB	Tumbler extraction of solids	USEPA SW 846-8270B
BTEX	Tumbler extraction of solids	USEPA SW 846-8260B
OC Pesticides	Tumbler extraction of solids	USEPA SW 846-8270B

3. Field quality assurance and quality control

Nine intra laboratory duplicate samples were collected for the investigation. The frequency was 6% which was in accordance with the recommended frequency of 5%. Table A1 outlines the samples collected and differences in replicate analyses. Relative differences were deemed to pass if they were within the acceptance limits of +/- 30% for replicate analyses or less than 5 times the detection limit.

Field duplicate frequency

Sample id.	Number of samples	Duplicate	Frequency (%)	Date collected	Substrate	Laboratory report
CR1, CR2, CR3, CR4, CR5, CR6, CR7, CR8, CR9, CR10, CR11, CR12, CR13, CR14, CR15, CR16, CR17, CR18, CR19, CR20, CR21, CR22, CR23, CR24, CR25, CR26, CR27, CR28, CR29, CR30, CR31, CR32, CR33, CR34, CR35, CR36, CR37, CR38, CR39, CR40, CR41, CR42, CR43, CR44, CR45, CR46, CR47, CR48, CR49, CR50, CR51, CR52, CR53, CR54, CR55, CR56, CR57, CR58, CR59, CR60, CR61, CR62, CR63, CR64, CR65, CR66, CR67, CR68, CR69, CR70, CR71, CR72, CR73, CR74, CR75, CR76, CR77, CR78, CR79, CR80, CR81, CR82, CR83, CR84, CR85, CR86, CR87, CR88, CR89, CR90, CR91, CR92, CR93, CR94, CR95, CR96, CR97, CR98, CR99, CR100, CR101, CR102, CR103, CR104, CR105, CR106, CR107, CR108, CR109. CR110, CR111, CR112, CR113, CR114, CR115, CR116, CR117, CR118, CR119, CR120, CR121, CR122, HS1, HS2, HS3, HS4, HS5, SL1, SL2	129	7	5	25/1/2023	Soil	SE242417 SE242417RE SE242420 SE242420A SE242420B SE242420RE
HS6(100), HS7(200), HS8(100), HS9(200), HS10, HS11, HS12, HS13, HS14, HS15, HS16, HS17, HS18, HS19, HS20	15	1	7	31/1/2023	Soil	SE242441

BH1(2000), BH2(2000), BH3(2000), HS21	4	1	25	2/2/2023	Soil	SE242583

Table A1. Relative differences for intra laboratory duplicates

	CR1	DA1	Relative difference (%)	Pass/Fail	CR21	DA2	Relative difference (%)	Pass/Fail
Arsenic	3	3	0	Pass	59	67	13	Pass
Cadmium	<0.3	<0.3	NA	-	0.7	0.7	0	Pass
Chromium (total)	8.3	12	36	Fail	16	13	21	Pass
Copper	13	15	14	Pass	120	130	8	Pass
Lead	14	19	30	Pass	210	250	17	Pass
Nickel	3.0	3.7	21	Pass	3.6	4.3	18	Pass
Zinc	84	74	13	Pass	40	41	2	Pass

NA – relative difference unable to be calculated as results are less than laboratory detection limit

	CR41	DA3	Relative difference (%)	Pass/Fail	CR61	DA4	Relative difference (%)	Pass/Fail
Arsenic	2	2	0	Pass	1	1	0	Pass
Cadmium	<0.3	<0.3	NA	-	<0.3	<0.3	NA	-
Chromium (total)	7.0	6.9	1	Pass	11	13	17	Pass
Copper	18	19	5	Pass	35	40	13	Pass
Lead	9	10	11	Pass	7	8	13	Pass
Nickel	2.1	2.1	0	Pass	2.7	3.0	11	Pass
Zinc	21	26	21	Pass	15	13	14	Pass

NA – relative difference unable to be calculated as results are less than laboratory detection limit

	CR81	DA5	Relative difference (%)	Pass/Fail	CR101	DA6	Relative difference (%)	Pass/Fail
Arsenic	6	7	15	Pass	1	<1	NA	-
Cadmium	<0.3	<0.3	NA	-	<0.3	<0.3	NA	-
Chromium (total)	16	17	6	Pass	7.3	6.3	15	Pass
Copper	43	54	23	Pass	3.1	2.9	7	Pass
Lead	26	29	11	Pass	7	7	0	Pass
Nickel	4.1	4.6	11	Pass	1.3	1.2	8	Pass
Zinc	16	15	6	Pass	11	11	0	Pass

NA – relative difference unable to be calculated as results are less than laboratory detection limit

	GC118	DA7	Relative difference (%)	Pass/Fail	HS(100)	DA8	Relative difference (%)	Pass/Fail
Arsenic	1	1	0	Pass	4	3	29	Pass
Cadmium	0.3	0.3	NA	-	<0.3	<0.3	NA	-
Chromium (total)	6.5	8.8	30	Pass	34	30	13	Pass
Copper	3.3	4.5	31	Fail	98	110	12	Pass
Lead	8	11	32	Fail	51	56	9	Pass
Nickel	1.3	1.6	21	Pass	5.6	5.8	4	Pass
Zinc	13	8.0	48	Fail	170	170	0	Pass

NA – relative difference unable to be calculated as results are less than laboratory detection limit, [1] Result less than 5 times the detection limit

	BH1(2000)	DA9	Relative difference (%)	Pass/Fail
TRH F1	<25	<25	NA	-
TRH F2	<25	<25	NA	-
TRH F3	<90	<90	NA	-
TRH F4	<120	<120	NA	-
Benzene	<0.1	<0.1	NA	-
Toluene	<0.1	<0.1	NA	-
Xylenes	<0.3	<0.3	NA	-
Naphthalene	<0.1	<0.1	NA	-

NA – relative difference unable to be calculated as results are less than laboratory detection limit

No trip blanks or spikes were submitted for analysis. This is not considered to create significant uncertainty in the analysis results because of the following rationale:

- The fieldwork was completed within a short time period and consistent methods were used for soil sampling.
- Soil samples were placed in insulated cooled containers after sampling to ensure preservation during transport and storage.
- The samples were placed in single use jars using clean sampling tools and disposable gloves from material not in contact with other samples. This reduces the likelihood of cross contamination.
- Samples in the analysis batch contain analytes below the level of detection. It is considered unlikely that contamination has occurred as a result of transport and handling.

4. Laboratory quality assurance and quality control

Sample holding times are recommended in NEPM (1999). The time between collection and extraction was generally less than the criteria listed below:

Analyte	Maximum holding time
Metals	6 months
Mercury	28 days
BTEXN, TRH, PAH, OCP, OPP	14 days

The laboratory interpretative reports are presented with individual laboratory report. Assessment is made of holding time, frequency of control samples and quality control samples. Outliers exist for moisture in SE238483 with analysis 1 day over due. The laboratory report also contains a detailed description of preparation methods and analytical methods.

The results, quality report, interpretative report and chain of custody are presented in the attached appendices. The quality report contains the laboratory duplicates, spikes, laboratory control samples, blanks and where appropriate matrix spike recovery (surrogate).

5. Data quality indicators (DQI)

5.1 Completeness

A measure of the amount of usable data for a data collection activity (total to be greater than 90%)

5.1.1 Field

Consideration	Accepted	Comment
Locations to be sampled	Yes	In accordance with sampling methodology, described in the report.
SOP appropriate and compiled	Yes	In accordance with sampling methodology
Experienced sampler	Yes	Environmental scientist
Documentation correct	Yes	Chain of custody completed

5.1.2 Laboratory

Consideration	Accepted	Comment
Samples analysed	Yes	In accordance with chain of custody and analysis plan.
Analytes	Yes	In accordance with chain of custody and analysis plan.
Methods	Yes	Analysed in NATA accredited laboratory with recognised methods and suitable PQL
Sample documentation	Yes	Completed including chain of custody and sample results and quality results
Sample holding times	Yes	Metals < 6 months Mercury < 28 days OCP, OPP, PAH, TRH, PCB, BTEXN < 14 days

5.2 Comparability

The confidence that data may be considered to be equivalent for each sampling and analytical event.

5.2.1 Field

Consideration	Accepted	Comment
SOP	Yes	Same sampling procedures used and sampled on one date
Experienced sampler	Yes	Experienced environmental scientist
Climatic conditions	Yes	Sampling log
Samples collected	Yes	Suitable size and storage

5.2.2 Laboratory

Consideration	Accepted	Comment
Analytical methods	Yes	Same methods all samples
PQL	Yes	Suitable for analytes
Same laboratory	Yes	-
Same units	Yes	-

5.3 Representativeness

The confidence (expressed qualitatively) that data are representative of each media present on the site.

5.3.1 Field

Consideration	Accepted	Comment
Appropriate media sampled	Yes	Sampled according to sampling and quality plan
All media identified	Yes	Soil sampling media identified in the sampling and quality plan

5.3.2 Laboratory

Consideration	Accepted	Comment
Samples analysed	Yes	Undertaken in NATA accredited laboratory. Samples in the analysis batch contain analytes below the level of detection. It is considered unlikely that contamination has occurred as a result of transport and handling.

5.4 Precision

A quantitative measure of the variability (or reproduced of the data)

5.4.1 Field

Consideration	Accepted	Comment
SOP	Yes	Complied
Field duplicates	Yes	Collected

5.4.2 Laboratory

Consideration	Accepted	Comment
Laboratory duplicates	No	Frequency of 5%, results to be within +/-40% or discussion required. RPD failed acceptance criteria due to sample heterogeneity (SE242417, SE242441, SE242583). Recovery failed acceptance criteria due to sample heterogeneity (SE242441).
Field duplicates (intra and inter laboratory)	Yes	Frequency of 5%, results to be within +/-30% or discussion required. Two duplicates exceeded the adopted RPD. Highest result reported. Not expected to impact on conclusions.
Laboratory prepared volatile trip spikes	NA	Frequency of 5%, results to be within +/-30% or discussion required.

5.5 Accuracy

A quantitative measure of the closeness of the reported data to the true value

5.5.1 Field

Consideration	**Accepted**	**Comment**
SOP	Yes	Complied
Field blanks	No	Not collected

5.5.2 Laboratory

Consideration	**Accepted**	**Comment**
Method blanks	Yes	Frequency of 5%, <5 times the PQL, PQL may be adjusted
Matrix spikes	No	Frequency of 5%, results to be within +/-40% or discussion required. Recovery failed acceptance criteria due to sample heterogeneity (SE242417, SE242417RE, SE242420B, SE242420RE, SE242441). Recovery failed acceptance due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level) (SE242441, SE242583). At least 2 of 3 surrogates are within acceptance criteria (SE242441).
Matrix duplicates	Yes	Frequency of 5%, results to be within +/-40% or discussion required.
Surrogate spikes	Yes	Frequency of 5%, results to be within +/-40% or discussion required.
Laboratory control samples	Yes	Frequency of 5%, results to be within +/-40% or discussion required.
Laboratory prepared spikes	Yes	Frequency of 5%, results to be within +/-40% or discussion required.

No trip blanks, field spikes or sample rinsates were submitted for analysis. This is not considered to create significant uncertainty in the analysis results because of the following rationale:

- The fieldwork methods used for soil sampling were consistent throughout the project with all in situ samples collected from material which had not been subject to exposure.
- The fieldwork was completed within a short time period and consistent methods were used for soil sampling.
- Soil samples were placed in insulated cooled containers as quickly as possible, with the containers filled to minimize headspace. The sample containers were sealed immediately after the sample was collected and chilled in an esky containing ice.

- The samples were stored in a refrigerator and transported with ice bricks to ensure preservation during transport and storage.
- The samples were placed in single use jars using clean sampling tools and disposable gloves from material not in contact with other samples. This reduces the likelihood of cross contamination.
- Samples in the analysis batches contained analytes below the level of detection. It is considered unlikely that contamination has occurred as a result of transport and handling.

6. Conclusion

All media appropriate to the objectives of this investigation have been adequately analysed and no area of significant uncertainty exist. It is concluded the data is usable for the purposes of the investigation.

Appendix 2. Field sampling log

Sampling log

Client	Fenlor
Contact	Dave Fenton
Job number	15156
Location	277 Cargo Road, Orange NSW
Date	25 January 2023
Investigator	Felipe Canavez
Weather conditions	Fine and hot

Sample ID	Matrix	Date	Analysis required	Observations/comments
CR1	Soil	25/01/2023	Arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), Nickel (Ni), zinc (Zn), mercury (Hg)	
CR2	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg,	
CR3	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR4	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, organochlorine pesticides (OCP)	
CR5	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR6	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR7	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR8	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR9	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR10	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR11	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR12	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR13	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR14	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR15	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR16	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR17	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR18	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR19	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR20	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR21	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR22	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR23	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR24	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR25	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR26	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR27	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR28	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR29	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR30	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR31	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR32	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR33	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR34	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR35	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR36	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR37	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR38	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR39	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR40	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR41	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR42	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR43	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	

CR44	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP, pH, cation exchange capacity, clay content	
CR45	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR46	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR47	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR48	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR49	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR50	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR51	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR52	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR53	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR54	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR55	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR56	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR57	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR58	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR59	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR60	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR61	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR62	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR63	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR64	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR65	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR66	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR67	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR68	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR69	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR70	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR71	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR72	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR73	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR74	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR75	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR76	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR77	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR78	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR79	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR80	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR81	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR82	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR83	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR84	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR85	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR86	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR87	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR88	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR89	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR90	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR91	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR92	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR93	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR94	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR95	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR96	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR97	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR98	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR99	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR100	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	

Sampling log

Client	Fenlor
Contact	Dave Fenton
Job number	15156-1
Location	277 Cargo Road, Orange NSW
Date	25 January 2023
Investigator	Felipe Canavez
Weather conditions	Fine and hot

Sample ID	Matrix	Date	Analysis required	Observations/comments
CR101	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR102	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR103	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR104	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR105	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR106	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR107	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR108	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR109	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, pH, cation exchange capacity, clay content	
CR110	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR111	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR112	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR113	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR114	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR115	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR116	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR117	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR118	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR119	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR120	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP	
CR121	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
CR122	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	
HS1	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, mercury (Hg), total recoverable hydrocarbons (TRH (C6-C40)), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH)	Car body
HS2	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH	Foreign materials stockpile 1
HS3	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH	Western animal shelter
HS4	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH	Foreign materials stockpile 2
HS5	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH	Eastern animal shelter
SL1	Sludge	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP and Organochlorine pesticides (OPP)	Western dam
SL2	Sludge	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, OCP, OPP	Eastern dam
DA1	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC8
DA2	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC21
DA3	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC41
DA4	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC61
DA5	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC81
DA6	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC101
DA7	Soil	25/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of GC121

Sampling log

Client	Fenlor
Contact	Dave Fenton
Job number	15156-2
Location	277 Cargo Road, Orange NSW
Date	31 January 2023
Investigator	Felipe Canavez
Weather conditions	Fine and hot

Sample ID	Matrix	Date	Analysis required	Observations/comments
HS6(100)	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide mixing area
HS7(200)	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide mixing area
HS8(100)	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide mixing area
HS9(200)	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide mixing area
HS10	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Area downslope of pesticide mixing area
HS11	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Area downslope of pesticide mixing area
HS12	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide storage shed
HS13	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide storage shed
HS14	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide storage shed
HS15	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Pesticide storage shed
HS16	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Soil discolouration from general storage shed 2
HS17	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	General storage shed 2
HS18	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Soil discolouration from machinery storage area, general storage shed 1
HS19	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Soil discolouration in general storage shed 1
HS20	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Garage in general storage shed 1
DA8	Soil	31/01/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg	Duplicate of HS6(100)
15156-1	Vinyl liner	31/01/2023	Asbestos identification	Floor liner

Sampling log

Client	Fenlor
Contact	Dave Fenton
Job number	15156-3
Location	277 Cargo Road, Orange NSW
Date	2 February 2023
Investigator	Felipe Canavez
Weather conditions	Fine and hot

Sample ID	Matrix	Date	Analysis required	Observations/comments
BH1(2000)	Soil	02/02/2023	TRH, BTEXN	North of underground subterranean tank (UST)
BH2(2000)	Soil	02/02/2023	TRH, BTEXN	East of UST
BH3(2000)	Soil	02/02/2023	TRH, BTEXN	South of UST
HS21	Soil	02/02/2023	As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, TRH, BTEXN, PAH, OCP, OPP	Fuel pump
DA9	Soil	02/02/2023	TRH, BTEXN	Duplicate of BH1(2000)

Appendix 3. Soil analysis results – SGS report number SE242417, SE242417RE, SE242420, SE242420A, SE242420B, SE242420RE, SE242441, SE242583 and chain of custody forms

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156**
Order Number	**15156**
Samples	100

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242417 R0**
Date Received	31/1/2023
Date Reported	7/2/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Clay Content subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. Report No. CE164439.

SIGNATORIES

[redacted]
Akheeqar BENIAMEEN
Chemist

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Shane MCDERMOTT
Inorganic/Metals Chemist

SGS

ANALYTICAL RESULTS SE242417 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023

PARAMETER	UOM	LOR	CR4 SOIL - 25/1/2023 SE242417.004	CR8 SOIL - 25/1/2023 SE242417.008	CR12 SOIL - 25/1/2023 SE242417.012	CR16 SOIL - 25/1/2023 SE242417.016	CR20 SOIL - 25/1/2023 SE242417.020
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE242417 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023 (continued)

PARAMETER	UOM	LOR	CR24 SOIL - 25/1/2023 SE242417.024	CR28 SOIL - 25/1/2023 SE242417.028	CR32 SOIL - 25/1/2023 SE242417.032	CR36 SOIL - 25/1/2023 SE242417.036	CR40 SOIL - 25/1/2023 SE242417.040
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

ANALYTICAL RESULTS SE242417 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023 (continued)

PARAMETER	UOM	LOR	CR44 SOIL - 25/1/2023 SE242417.044	CR48 SOIL - 25/1/2023 SE242417.048	CR52 SOIL - 25/1/2023 SE242417.052	CR56 SOIL - 25/1/2023 SE242417.056	CR60 SOIL - 25/1/2023 SE242417.060
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	**0.3**	<0.1	<0.1	**0.2**
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS

SE242417 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023 (continued)

PARAMETER	UOM	LOR	CR64 SOIL - 25/1/2023 SE242417.064	CR68 SOIL - 25/1/2023 SE242417.068	CR72 SOIL - 25/1/2023 SE242417.072	CR76 SOIL - 25/1/2023 SE242417.076	CR80 SOIL - 25/1/2023 SE242417.080
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	**0.4**	<0.1	**0.3**	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE242417 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023 (continued)

PARAMETER	UOM	LOR	CR84 SOIL - 25/1/2023 SE242417.084	CR88 SOIL - 25/1/2023 SE242417.088	CR92 SOIL - 25/1/2023 SE242417.092	CR96 SOIL - 25/1/2023 SE242417.096	CR100 SOIL - 25/1/2023 SE242417.100
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS

SE242417 R0

pH in soil (1:5) [AN101] Tested: 3/2/2023

PARAMETER	UOM	LOR	CR44 SOIL - 25/1/2023 SE242417.044
pH	pH Units	0.1	5.4

SGS

ANALYTICAL RESULTS

SE242417 R0

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 6/2/2023

PARAMETER	UOM	LOR	CR44 SOIL - 25/1/2023 SE242417.044
Exchangeable Calcium, Ca	mg/kg	2	670
Exchangeable Calcium, Ca	meq/100g	0.01	3.3
Exchangeable Calcium Percentage*	%	0.1	72.7
Exchangeable Potassium, K	mg/kg	2	130
Exchangeable Potassium, K	meq/100g	0.01	0.32
Exchangeable Potassium Percentage*	%	0.1	7.0
Exchangeable Magnesium, Mg	mg/kg	2	110
Exchangeable Magnesium, Mg	meq/100g	0.02	0.91
Exchangeable Magnesium Percentage*	%	0.1	19.9
Exchangeable Sodium, Na	mg/kg	2	5
Exchangeable Sodium, Na	meq/100g	0.01	0.02
Exchangeable Sodium Percentage*	%	0.1	0.5
Cation Exchange Capacity	meq/100g	0.02	4.6

SGS

ANALYTICAL RESULTS SE242417 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/2/2023

PARAMETER	UOM	LOR	CR1 SOIL - 25/1/2023 SE242417.001	CR2 SOIL - 25/1/2023 SE242417.002	CR3 SOIL - 25/1/2023 SE242417.003	CR4 SOIL - 25/1/2023 SE242417.004	CR5 SOIL - 25/1/2023 SE242417.005
Arsenic, As	mg/kg	1	3	2	5	10	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	9.6	8.2	5.3	5.5
Copper, Cu	mg/kg	0.5	15	11	17	16	27
Lead, Pb	mg/kg	1	20	11	30	48	9
Nickel, Ni	mg/kg	0.5	3.5	2.5	1.7	0.9	1.9
Zinc, Zn	mg/kg	2	78	21	14	17	30

PARAMETER	UOM	LOR	CR6 SOIL - 25/1/2023 SE242417.006	CR7 SOIL - 25/1/2023 SE242417.007	CR8 SOIL - 25/1/2023 SE242417.008	CR9 SOIL - 25/1/2023 SE242417.009	CR10 SOIL - 25/1/2023 SE242417.010
Arsenic, As	mg/kg	1	2	1	1	3	27
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	7.8	7.7	6.4	9.4
Copper, Cu	mg/kg	0.5	18	10	4.7	14	31
Lead, Pb	mg/kg	1	9	6	6	12	83
Nickel, Ni	mg/kg	0.5	2.4	1.6	1.2	1.5	1.7
Zinc, Zn	mg/kg	2	25	11	9	17	13

PARAMETER	UOM	LOR	CR11 SOIL - 25/1/2023 SE242417.011	CR12 SOIL - 25/1/2023 SE242417.012	CR13 SOIL - 25/1/2023 SE242417.013	CR14 SOIL - 25/1/2023 SE242417.014	CR15 SOIL - 25/1/2023 SE242417.015
Arsenic, As	mg/kg	1	23	2	3	24	18
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.9	18	15	9.8	7.5
Copper, Cu	mg/kg	0.5	27	16	10	41	37
Lead, Pb	mg/kg	1	60	10	15	100	93
Nickel, Ni	mg/kg	0.5	1.7	4.0	4.7	2.2	1.7
Zinc, Zn	mg/kg	2	14	140	46	14	14

PARAMETER	UOM	LOR	CR16 SOIL - 25/1/2023 SE242417.016	CR17 SOIL - 25/1/2023 SE242417.017	CR18 SOIL - 25/1/2023 SE242417.018	CR19 SOIL - 25/1/2023 SE242417.019	CR20 SOIL - 25/1/2023 SE242417.020
Arsenic, As	mg/kg	1	5	1	<1	<1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.9	4.9	4.8	6.1	8.2
Copper, Cu	mg/kg	0.5	15	7.9	6.6	8.1	8.6
Lead, Pb	mg/kg	1	21	6	5	5	7
Nickel, Ni	mg/kg	0.5	1.1	0.9	1.0	1.3	1.5
Zinc, Zn	mg/kg	2	8	9	7	13	13

SGS

ANALYTICAL RESULTS SE242417 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/2/2023

PARAMETER	UOM	LOR	CR21 SOIL - 25/1/2023 SE242417.021	CR22 SOIL - 25/1/2023 SE242417.022	CR23 SOIL - 25/1/2023 SE242417.023	CR24 SOIL - 25/1/2023 SE242417.024	CR25 SOIL - 25/1/2023 SE242417.025
Arsenic, As	mg/kg	1	59	30	37	3	26
Cadmium, Cd	mg/kg	0.3	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	15	16	11	13	19
Copper, Cu	mg/kg	0.5	110	56	77	16	59
Lead, Pb	mg/kg	1	200	110	130	11	95
Nickel, Ni	mg/kg	0.5	3.4	4.0	4.0	4.7	4.0
Zinc, Zn	mg/kg	2	35	18	26	28	69

PARAMETER	UOM	LOR	CR26 SOIL - 25/1/2023 SE242417.026	CR27 SOIL - 25/1/2023 SE242417.027	CR28 SOIL - 25/1/2023 SE242417.028	CR29 SOIL - 25/1/2023 SE242417.029	CR30 SOIL - 25/1/2023 SE242417.030
Arsenic, As	mg/kg	1	25	2	3	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	12	17	22	10
Copper, Cu	mg/kg	0.5	68	24	18	11	16
Lead, Pb	mg/kg	1	120	11	11	12	10
Nickel, Ni	mg/kg	0.5	2.8	3.9	4.4	5.0	3.4
Zinc, Zn	mg/kg	2	26	18	24	110	16

PARAMETER	UOM	LOR	CR31 SOIL - 25/1/2023 SE242417.031	CR32 SOIL - 25/1/2023 SE242417.032	CR33 SOIL - 25/1/2023 SE242417.033	CR34 SOIL - 25/1/2023 SE242417.034	CR35 SOIL - 25/1/2023 SE242417.035
Arsenic, As	mg/kg	1	13	2	1	2	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	11	8.6	16	24
Copper, Cu	mg/kg	0.5	22	12	14	21	26
Lead, Pb	mg/kg	1	44	8	8	9	12
Nickel, Ni	mg/kg	0.5	3.1	3.4	2.6	4.6	5.8
Zinc, Zn	mg/kg	2	20	20	20	20	27

PARAMETER	UOM	LOR	CR36 SOIL - 25/1/2023 SE242417.036	CR37 SOIL - 25/1/2023 SE242417.037	CR38 SOIL - 25/1/2023 SE242417.038	CR39 SOIL - 25/1/2023 SE242417.039	CR40 SOIL - 25/1/2023 SE242417.040
Arsenic, As	mg/kg	1	2	1	<1	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	9.6	6.7	6.6	9.8
Copper, Cu	mg/kg	0.5	24	16	12	12	12
Lead, Pb	mg/kg	1	7	6	5	4	9
Nickel, Ni	mg/kg	0.5	2.8	1.7	1.4	1.1	2.2
Zinc, Zn	mg/kg	2	20	12	11	10	14

SGS

ANALYTICAL RESULTS SE242417 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/2/2023

PARAMETER	UOM	LOR	CR41 SOIL - 25/1/2023 SE242417.041	CR42 SOIL - 25/1/2023 SE242417.042	CR43 SOIL - 25/1/2023 SE242417.043	CR44 SOIL - 25/1/2023 SE242417.044	CR45 SOIL - 25/1/2023 SE242417.045
Arsenic, As	mg/kg	1	2	1	1	2	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.3	10	8.3	11	5.9
Copper, Cu	mg/kg	0.5	16	21	23	23	22
Lead, Pb	mg/kg	1	8	6	6	6	5
Nickel, Ni	mg/kg	0.5	1.8	1.7	1.6	1.9	1.4
Zinc, Zn	mg/kg	2	32	21	14	16	24

PARAMETER	UOM	LOR	CR46 SOIL - 25/1/2023 SE242417.046	CR47 SOIL - 25/1/2023 SE242417.047	CR48 SOIL - 25/1/2023 SE242417.048	CR49 SOIL - 25/1/2023 SE242417.049	CR50 SOIL - 25/1/2023 SE242417.050
Arsenic, As	mg/kg	1	2	1	2	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.6	8.6	17	18	14
Copper, Cu	mg/kg	0.5	34	30	32	30	46
Lead, Pb	mg/kg	1	12	10	9	10	8
Nickel, Ni	mg/kg	0.5	2.0	1.7	3.4	3.5	3.3
Zinc, Zn	mg/kg	2	39	35	28	15	22

PARAMETER	UOM	LOR	CR51 SOIL - 25/1/2023 SE242417.051	CR52 SOIL - 25/1/2023 SE242417.052	CR53 SOIL - 25/1/2023 SE242417.053	CR54 SOIL - 25/1/2023 SE242417.054	CR55 SOIL - 25/1/2023 SE242417.055
Arsenic, As	mg/kg	1	2	1	1	1	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	24	9.5	9.1	20
Copper, Cu	mg/kg	0.5	38	36	35	24	35
Lead, Pb	mg/kg	1	9	8	6	6	14
Nickel, Ni	mg/kg	0.5	4.2	3.3	2.2	1.9	2.0
Zinc, Zn	mg/kg	2	20	13	13	10	11

PARAMETER	UOM	LOR	CR56 SOIL - 25/1/2023 SE242417.056	CR57 SOIL - 25/1/2023 SE242417.057	CR58 SOIL - 25/1/2023 SE242417.058	CR59 SOIL - 25/1/2023 SE242417.059	CR60 SOIL - 25/1/2023 SE242417.060
Arsenic, As	mg/kg	1	7	24	11	11	11
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	8.3	6.9	8.3	10
Copper, Cu	mg/kg	0.5	32	39	37	45	49
Lead, Pb	mg/kg	1	28	98	43	48	49
Nickel, Ni	mg/kg	0.5	2.0	1.6	1.8	1.8	1.9
Zinc, Zn	mg/kg	2	14	18	18	20	21

SGS

ANALYTICAL RESULTS SE242417 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/2/2023

PARAMETER	UOM	LOR	CR61 SOIL - 25/1/2023 SE242417.061	CR62 SOIL - 25/1/2023 SE242417.062	CR63 SOIL - 25/1/2023 SE242417.063	CR64 SOIL - 25/1/2023 SE242417.064	CR65 SOIL - 25/1/2023 SE242417.065
Arsenic, As	mg/kg	1	2	2	2	3	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	13	13	21	22
Copper, Cu	mg/kg	0.5	34	34	40	43	51
Lead, Pb	mg/kg	1	7	7	8	12	10
Nickel, Ni	mg/kg	0.5	2.4	2.5	3.5	5.2	3.8
Zinc, Zn	mg/kg	2	15	14	18	31	26

PARAMETER	UOM	LOR	CR66 SOIL - 25/1/2023 SE242417.066	CR67 SOIL - 25/1/2023 SE242417.067	CR68 SOIL - 25/1/2023 SE242417.068	CR69 SOIL - 25/1/2023 SE242417.069	CR70 SOIL - 25/1/2023 SE242417.070
Arsenic, As	mg/kg	1	1	3	2	3	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	29	17	24	24
Copper, Cu	mg/kg	0.5	28	67	32	46	41
Lead, Pb	mg/kg	1	8	18	10	13	24
Nickel, Ni	mg/kg	0.5	2.3	5.5	3.2	5.2	6.1
Zinc, Zn	mg/kg	2	23	60	53	100	46

PARAMETER	UOM	LOR	CR71 SOIL - 25/1/2023 SE242417.071	CR72 SOIL - 25/1/2023 SE242417.072	CR73 SOIL - 25/1/2023 SE242417.073	CR74 SOIL - 25/1/2023 SE242417.074	CR75 SOIL - 25/1/2023 SE242417.075
Arsenic, As	mg/kg	1	3	3	2	3	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	13	12	8.8	7.3
Copper, Cu	mg/kg	0.5	32	29	35	24	19
Lead, Pb	mg/kg	1	13	14	13	16	12
Nickel, Ni	mg/kg	0.5	3.4	4.8	3.4	2.1	1.6
Zinc, Zn	mg/kg	2	28	21	18	13	20

PARAMETER	UOM	LOR	CR76 SOIL - 25/1/2023 SE242417.076	CR77 SOIL - 25/1/2023 SE242417.077	CR78 SOIL - 25/1/2023 SE242417.078	CR79 SOIL - 25/1/2023 SE242417.079	CR80 SOIL - 25/1/2023 SE242417.080
Arsenic, As	mg/kg	1	2	3	6	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	6.8	7.0	10	17	19
Copper, Cu	mg/kg	0.5	21	18	34	33	31
Lead, Pb	mg/kg	1	10	12	26	24	20
Nickel, Ni	mg/kg	0.5	1.5	1.8	2.4	3.3	4.0
Zinc, Zn	mg/kg	2	14	15	12	13	18

SGS

ANALYTICAL RESULTS

SE242417 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/2/2023

PARAMETER	UOM	LOR	CR81 SOIL - 25/1/2023 SE242417.081	CR82 SOIL - 25/1/2023 SE242417.082	CR83 SOIL - 25/1/2023 SE242417.083	CR84 SOIL - 25/1/2023 SE242417.084	CR85 SOIL - 25/1/2023 SE242417.085
Arsenic, As	mg/kg	1	6	5	8	6	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	15	26	22	15
Copper, Cu	mg/kg	0.5	42	35	65	130	63
Lead, Pb	mg/kg	1	26	23	240	30	30
Nickel, Ni	mg/kg	0.5	4.1	4.6	6.3	5.1	4.2
Zinc, Zn	mg/kg	2	19	65	22	32	15

PARAMETER	UOM	LOR	CR86 SOIL - 25/1/2023 SE242417.086	CR87 SOIL - 25/1/2023 SE242417.087	CR88 SOIL - 25/1/2023 SE242417.088	CR89 SOIL - 25/1/2023 SE242417.089	CR90 SOIL - 25/1/2023 SE242417.090
Arsenic, As	mg/kg	1	6	4	5	3	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	18	13	10	7.5	5.9
Copper, Cu	mg/kg	0.5	50	33	28	20	18
Lead, Pb	mg/kg	1	26	22	22	16	14
Nickel, Ni	mg/kg	0.5	4.9	5.2	3.4	2.3	1.5
Zinc, Zn	mg/kg	2	30	31	27	11	18

PARAMETER	UOM	LOR	CR91 SOIL - 25/1/2023 SE242417.091	CR92 SOIL - 25/1/2023 SE242417.092	CR93 SOIL - 25/1/2023 SE242417.093	CR94 SOIL - 25/1/2023 SE242417.094	CR95 SOIL - 25/1/2023 SE242417.095
Arsenic, As	mg/kg	1	<1	2	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	6.8	11	6.6	6.4	6.7
Copper, Cu	mg/kg	0.5	12	9.5	6.1	6.5	3.6
Lead, Pb	mg/kg	1	12	11	11	11	8
Nickel, Ni	mg/kg	0.5	2.2	3.3	2.1	1.8	1.3
Zinc, Zn	mg/kg	2	98	24	11	11	8

PARAMETER	UOM	LOR	CR96 SOIL - 25/1/2023 SE242417.096	CR97 SOIL - 25/1/2023 SE242417.097	CR98 SOIL - 25/1/2023 SE242417.098	CR99 SOIL - 25/1/2023 SE242417.099	CR100 SOIL - 25/1/2023 SE242417.100
Arsenic, As	mg/kg	1	<1	<1	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.9	5.9	7.6	6.9	6.1
Copper, Cu	mg/kg	0.5	5.1	3.5	7.7	3.8	3.1
Lead, Pb	mg/kg	1	8	8	8	8	6
Nickel, Ni	mg/kg	0.5	1.7	1.3	2.1	1.4	1.2
Zinc, Zn	mg/kg	2	24	12	21	14	10

SGS

ANALYTICAL RESULTS

SE242417 R0

Mercury in Soil [AN312] Tested: 2/2/2023

PARAMETER	UOM	LOR	CR1 SOIL - 25/1/2023 SE242417.001	CR2 SOIL - 25/1/2023 SE242417.002	CR3 SOIL - 25/1/2023 SE242417.003	CR4 SOIL - 25/1/2023 SE242417.004	CR5 SOIL - 25/1/2023 SE242417.005
Mercury	mg/kg	0.05	0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR6 SOIL - 25/1/2023 SE242417.006	CR7 SOIL - 25/1/2023 SE242417.007	CR8 SOIL - 25/1/2023 SE242417.008	CR9 SOIL - 25/1/2023 SE242417.009	CR10 SOIL - 25/1/2023 SE242417.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR11 SOIL - 25/1/2023 SE242417.011	CR12 SOIL - 25/1/2023 SE242417.012	CR13 SOIL - 25/1/2023 SE242417.013	CR14 SOIL - 25/1/2023 SE242417.014	CR15 SOIL - 25/1/2023 SE242417.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR16 SOIL - 25/1/2023 SE242417.016	CR17 SOIL - 25/1/2023 SE242417.017	CR18 SOIL - 25/1/2023 SE242417.018	CR19 SOIL - 25/1/2023 SE242417.019	CR20 SOIL - 25/1/2023 SE242417.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR21 SOIL - 25/1/2023 SE242417.021	CR22 SOIL - 25/1/2023 SE242417.022	CR23 SOIL - 25/1/2023 SE242417.023	CR24 SOIL - 25/1/2023 SE242417.024	CR25 SOIL - 25/1/2023 SE242417.025
Mercury	mg/kg	0.05	0.08	<0.05	0.06	<0.05	<0.05

PARAMETER	UOM	LOR	CR26 SOIL - 25/1/2023 SE242417.026	CR27 SOIL - 25/1/2023 SE242417.027	CR28 SOIL - 25/1/2023 SE242417.028	CR29 SOIL - 25/1/2023 SE242417.029	CR30 SOIL - 25/1/2023 SE242417.030
Mercury	mg/kg	0.05	0.08	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR31 SOIL - 25/1/2023 SE242417.031	CR32 SOIL - 25/1/2023 SE242417.032	CR33 SOIL - 25/1/2023 SE242417.033	CR34 SOIL - 25/1/2023 SE242417.034	CR35 SOIL - 25/1/2023 SE242417.035
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

SGS

ANALYTICAL RESULTS

SE242417 R0

Mercury in Soil [AN312] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	CR36 SOIL - 25/1/2023 SE242417.036	CR37 SOIL - 25/1/2023 SE242417.037	CR38 SOIL - 25/1/2023 SE242417.038	CR39 SOIL - 25/1/2023 SE242417.039	CR40 SOIL - 25/1/2023 SE242417.040
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR41 SOIL - 25/1/2023 SE242417.041	CR42 SOIL - 25/1/2023 SE242417.042	CR43 SOIL - 25/1/2023 SE242417.043	CR44 SOIL - 25/1/2023 SE242417.044	CR45 SOIL - 25/1/2023 SE242417.045
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR46 SOIL - 25/1/2023 SE242417.046	CR47 SOIL - 25/1/2023 SE242417.047	CR48 SOIL - 25/1/2023 SE242417.048	CR49 SOIL - 25/1/2023 SE242417.049	CR50 SOIL - 25/1/2023 SE242417.050
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR51 SOIL - 25/1/2023 SE242417.051	CR52 SOIL - 25/1/2023 SE242417.052	CR53 SOIL - 25/1/2023 SE242417.053	CR54 SOIL - 25/1/2023 SE242417.054	CR55 SOIL - 25/1/2023 SE242417.055
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR56 SOIL - 25/1/2023 SE242417.056	CR57 SOIL - 25/1/2023 SE242417.057	CR58 SOIL - 25/1/2023 SE242417.058	CR59 SOIL - 25/1/2023 SE242417.059	CR60 SOIL - 25/1/2023 SE242417.060
Mercury	mg/kg	0.05	<0.05	**0.06**	<0.05	<0.05	**0.05**

PARAMETER	UOM	LOR	CR61 SOIL - 25/1/2023 SE242417.061	CR62 SOIL - 25/1/2023 SE242417.062	CR63 SOIL - 25/1/2023 SE242417.063	CR64 SOIL - 25/1/2023 SE242417.064	CR65 SOIL - 25/1/2023 SE242417.065
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR66 SOIL - 25/1/2023 SE242417.066	CR67 SOIL - 25/1/2023 SE242417.067	CR68 SOIL - 25/1/2023 SE242417.068	CR69 SOIL - 25/1/2023 SE242417.069	CR70 SOIL - 25/1/2023 SE242417.070
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

SGS

ANALYTICAL RESULTS

SE242417 R0

Mercury in Soil [AN312] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	CR71 SOIL - 25/1/2023 SE242417.071	CR72 SOIL - 25/1/2023 SE242417.072	CR73 SOIL - 25/1/2023 SE242417.073	CR74 SOIL - 25/1/2023 SE242417.074	CR75 SOIL - 25/1/2023 SE242417.075
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR76 SOIL - 25/1/2023 SE242417.076	CR77 SOIL - 25/1/2023 SE242417.077	CR78 SOIL - 25/1/2023 SE242417.078	CR79 SOIL - 25/1/2023 SE242417.079	CR80 SOIL - 25/1/2023 SE242417.080
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR81 SOIL - 25/1/2023 SE242417.081	CR82 SOIL - 25/1/2023 SE242417.082	CR83 SOIL - 25/1/2023 SE242417.083	CR84 SOIL - 25/1/2023 SE242417.084	CR85 SOIL - 25/1/2023 SE242417.085
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR86 SOIL - 25/1/2023 SE242417.086	CR87 SOIL - 25/1/2023 SE242417.087	CR88 SOIL - 25/1/2023 SE242417.088	CR89 SOIL - 25/1/2023 SE242417.089	CR90 SOIL - 25/1/2023 SE242417.090
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR91 SOIL - 25/1/2023 SE242417.091	CR92 SOIL - 25/1/2023 SE242417.092	CR93 SOIL - 25/1/2023 SE242417.093	CR94 SOIL - 25/1/2023 SE242417.094	CR95 SOIL - 25/1/2023 SE242417.095
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR96 SOIL - 25/1/2023 SE242417.096	CR97 SOIL - 25/1/2023 SE242417.097	CR98 SOIL - 25/1/2023 SE242417.098	CR99 SOIL - 25/1/2023 SE242417.099	CR100 SOIL - 25/1/2023 SE242417.100
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

SGS

ANALYTICAL RESULTS

SE242417 R0

Moisture Content [AN002] Tested: 2/2/2023

PARAMETER	UOM	LOR	CR1 SOIL - 25/1/2023 SE242417.001	CR2 SOIL - 25/1/2023 SE242417.002	CR3 SOIL - 25/1/2023 SE242417.003	CR4 SOIL - 25/1/2023 SE242417.004	CR5 SOIL - 25/1/2023 SE242417.005
% Moisture	%w/w	1	25.2	26.2	32.0	10.4	29.4

PARAMETER	UOM	LOR	CR6 SOIL - 25/1/2023 SE242417.006	CR7 SOIL - 25/1/2023 SE242417.007	CR8 SOIL - 25/1/2023 SE242417.008	CR9 SOIL - 25/1/2023 SE242417.009	CR10 SOIL - 25/1/2023 SE242417.010
% Moisture	%w/w	1	24.1	20.5	14.0	21.0	15.2

PARAMETER	UOM	LOR	CR11 SOIL - 25/1/2023 SE242417.011	CR12 SOIL - 25/1/2023 SE242417.012	CR13 SOIL - 25/1/2023 SE242417.013	CR14 SOIL - 25/1/2023 SE242417.014	CR15 SOIL - 25/1/2023 SE242417.015
% Moisture	%w/w	1	19.3	14.9	13.7	16.2	12.8

PARAMETER	UOM	LOR	CR16 SOIL - 25/1/2023 SE242417.016	CR17 SOIL - 25/1/2023 SE242417.017	CR18 SOIL - 25/1/2023 SE242417.018	CR19 SOIL - 25/1/2023 SE242417.019	CR20 SOIL - 25/1/2023 SE242417.020
% Moisture	%w/w	1	8.9	15.4	15.0	9.4	20.4

PARAMETER	UOM	LOR	CR21 SOIL - 25/1/2023 SE242417.021	CR22 SOIL - 25/1/2023 SE242417.022	CR23 SOIL - 25/1/2023 SE242417.023	CR24 SOIL - 25/1/2023 SE242417.024	CR25 SOIL - 25/1/2023 SE242417.025
% Moisture	%w/w	1	11.3	11.3	20.2	12.7	11.3

PARAMETER	UOM	LOR	CR26 SOIL - 25/1/2023 SE242417.026	CR27 SOIL - 25/1/2023 SE242417.027	CR28 SOIL - 25/1/2023 SE242417.028	CR29 SOIL - 25/1/2023 SE242417.029	CR30 SOIL - 25/1/2023 SE242417.030
% Moisture	%w/w	1	16.8	21.6	25.9	13.7	18.6

PARAMETER	UOM	LOR	CR31 SOIL - 25/1/2023 SE242417.031	CR32 SOIL - 25/1/2023 SE242417.032	CR33 SOIL - 25/1/2023 SE242417.033	CR34 SOIL - 25/1/2023 SE242417.034	CR35 SOIL - 25/1/2023 SE242417.035
% Moisture	%w/w	1	16.1	14.6	8.1	10.0	8.5

SGS

ANALYTICAL RESULTS

SE242417 R0

Moisture Content [AN002] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	CR36 SOIL - 25/1/2023 SE242417.036	CR37 SOIL - 25/1/2023 SE242417.037	CR38 SOIL - 25/1/2023 SE242417.038	CR39 SOIL - 25/1/2023 SE242417.039	CR40 SOIL - 25/1/2023 SE242417.040
% Moisture	%w/w	1	26.5	12.3	8.8	9.2	10.5

PARAMETER	UOM	LOR	CR41 SOIL - 25/1/2023 SE242417.041	CR42 SOIL - 25/1/2023 SE242417.042	CR43 SOIL - 25/1/2023 SE242417.043	CR44 SOIL - 25/1/2023 SE242417.044	CR45 SOIL - 25/1/2023 SE242417.045
% Moisture	%w/w	1	20.1	8.0	12.9	11.0	17.0

PARAMETER	UOM	LOR	CR46 SOIL - 25/1/2023 SE242417.046	CR47 SOIL - 25/1/2023 SE242417.047	CR48 SOIL - 25/1/2023 SE242417.048	CR49 SOIL - 25/1/2023 SE242417.049	CR50 SOIL - 25/1/2023 SE242417.050
% Moisture	%w/w	1	10.6	11.9	9.6	5.5	9.8

PARAMETER	UOM	LOR	CR51 SOIL - 25/1/2023 SE242417.051	CR52 SOIL - 25/1/2023 SE242417.052	CR53 SOIL - 25/1/2023 SE242417.053	CR54 SOIL - 25/1/2023 SE242417.054	CR55 SOIL - 25/1/2023 SE242417.055
% Moisture	%w/w	1	8.1	14.9	9.0	11.8	9.8

PARAMETER	UOM	LOR	CR56 SOIL - 25/1/2023 SE242417.056	CR57 SOIL - 25/1/2023 SE242417.057	CR58 SOIL - 25/1/2023 SE242417.058	CR59 SOIL - 25/1/2023 SE242417.059	CR60 SOIL - 25/1/2023 SE242417.060
% Moisture	%w/w	1	9.2	15.9	12.1	10.5	12.9

PARAMETER	UOM	LOR	CR61 SOIL - 25/1/2023 SE242417.061	CR62 SOIL - 25/1/2023 SE242417.062	CR63 SOIL - 25/1/2023 SE242417.063	CR64 SOIL - 25/1/2023 SE242417.064	CR65 SOIL - 25/1/2023 SE242417.065
% Moisture	%w/w	1	8.1	8.7	13.0	9.9	5.0

PARAMETER	UOM	LOR	CR66 SOIL - 25/1/2023 SE242417.066	CR67 SOIL - 25/1/2023 SE242417.067	CR68 SOIL - 25/1/2023 SE242417.068	CR69 SOIL - 25/1/2023 SE242417.069	CR70 SOIL - 25/1/2023 SE242417.070
% Moisture	%w/w	1	7.9	7.9	9.9	7.2	8.6

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ANALYTICAL RESULTS

SE242417 R0

Moisture Content [AN002] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	CR71 SOIL - 25/1/2023 SE242417.071	CR72 SOIL - 25/1/2023 SE242417.072	CR73 SOIL - 25/1/2023 SE242417.073	CR74 SOIL - 25/1/2023 SE242417.074	CR75 SOIL - 25/1/2023 SE242417.075
% Moisture	%w/w	1	9.5	24.8	10.1	13.0	4.4

PARAMETER	UOM	LOR	CR76 SOIL - 25/1/2023 SE242417.076	CR77 SOIL - 25/1/2023 SE242417.077	CR78 SOIL - 25/1/2023 SE242417.078	CR79 SOIL - 25/1/2023 SE242417.079	CR80 SOIL - 25/1/2023 SE242417.080
% Moisture	%w/w	1	8.8	9.3	8.6	10.9	12.2

PARAMETER	UOM	LOR	CR81 SOIL - 25/1/2023 SE242417.081	CR82 SOIL - 25/1/2023 SE242417.082	CR83 SOIL - 25/1/2023 SE242417.083	CR84 SOIL - 25/1/2023 SE242417.084	CR85 SOIL - 25/1/2023 SE242417.085
% Moisture	%w/w	1	5.9	18.8	6.5	6.6	9.6

PARAMETER	UOM	LOR	CR86 SOIL - 25/1/2023 SE242417.086	CR87 SOIL - 25/1/2023 SE242417.087	CR88 SOIL - 25/1/2023 SE242417.088	CR89 SOIL - 25/1/2023 SE242417.089	CR90 SOIL - 25/1/2023 SE242417.090
% Moisture	%w/w	1	16.1	13.4	9.2	8.6	4.3

PARAMETER	UOM	LOR	CR91 SOIL - 25/1/2023 SE242417.091	CR92 SOIL - 25/1/2023 SE242417.092	CR93 SOIL - 25/1/2023 SE242417.093	CR94 SOIL - 25/1/2023 SE242417.094	CR95 SOIL - 25/1/2023 SE242417.095
% Moisture	%w/w	1	11.4	22.5	24.8	11.0	13.5

PARAMETER	UOM	LOR	CR96 SOIL - 25/1/2023 SE242417.096	CR97 SOIL - 25/1/2023 SE242417.097	CR98 SOIL - 25/1/2023 SE242417.098	CR99 SOIL - 25/1/2023 SE242417.099	CR100 SOIL - 25/1/2023 SE242417.100
% Moisture	%w/w	1	20.9	32.2	18.5	28.5	17.5

SGS

ANALYTICAL RESULTS

SE242417 R0

Particle sizing of soils by sieving [AN005] Tested: 7/2/2023

PARAMETER	UOM	LOR	CR44 SOIL - 25/1/2023 SE242417.044
Passing 75µm*	%w/w	1	91
Retained 75µm*	%w/w	1	9

SGS

ANALYTICAL RESULTS

SE242417 R0

Particle sizing of soils <75µm by hydrometer [AN005] Tested: 7/2/2023

PARAMETER	UOM	LOR	CR44 SOIL - 25/1/2023 SE242417.044
Clay (<0.002mm)*	%w/w	0.1	3.0

SGS

METHOD SUMMARY

SE242417 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN122	Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
AN122	The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100. ESP can be used to categorise the sodicity of the soil as below: ESP < 6% non-sodic ESP 6-15% sodic ESP >15% strongly sodic Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

FOOTNOTES SE242417 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242417 R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156**
Order Number	**15156**
Samples	100

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242417 R0**
Date Received	31 Jan 2023
Date Reported	07 Feb 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	pH in soil (1:5)	1 item
Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Sample counts by matrix	100 Soil	Type of documentation received	COC
Date documentation received	31/1/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	21.7°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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SGS

HOLDING TIME SUMMARY

SE242417 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) — Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR44	SE242417.044	LB270623	25 Jan 2023	31 Jan 2023	22 Feb 2023	06 Feb 2023	22 Feb 2023	06 Feb 2023

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR1	SE242417.001	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR2	SE242417.002	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR3	SE242417.003	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR4	SE242417.004	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR5	SE242417.005	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR6	SE242417.006	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR7	SE242417.007	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR8	SE242417.008	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR9	SE242417.009	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR10	SE242417.010	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR11	SE242417.011	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR12	SE242417.012	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR13	SE242417.013	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR14	SE242417.014	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR15	SE242417.015	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR16	SE242417.016	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR17	SE242417.017	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR18	SE242417.018	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR19	SE242417.019	LB270325	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR20	SE242417.020	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR21	SE242417.021	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR22	SE242417.022	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR23	SE242417.023	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR24	SE242417.024	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR25	SE242417.025	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR26	SE242417.026	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR27	SE242417.027	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR28	SE242417.028	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR29	SE242417.029	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR30	SE242417.030	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR31	SE242417.031	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR32	SE242417.032	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR33	SE242417.033	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR34	SE242417.034	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR35	SE242417.035	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR36	SE242417.036	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR37	SE242417.037	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR38	SE242417.038	LB270326	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR39	SE242417.039	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR40	SE242417.040	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR41	SE242417.041	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR42	SE242417.042	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR43	SE242417.043	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR44	SE242417.044	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR45	SE242417.045	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR46	SE242417.046	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR47	SE242417.047	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR48	SE242417.048	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR49	SE242417.049	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR50	SE242417.050	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR51	SE242417.051	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR52	SE242417.052	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR53	SE242417.053	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR54	SE242417.054	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR55	SE242417.055	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242417 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil (continued) — Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR56	SE242417.056	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR57	SE242417.057	LB270327	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR58	SE242417.058	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR59	SE242417.059	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR60	SE242417.060	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR61	SE242417.061	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR62	SE242417.062	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR63	SE242417.063	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR64	SE242417.064	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR65	SE242417.065	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR66	SE242417.066	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR67	SE242417.067	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR68	SE242417.068	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR69	SE242417.069	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR70	SE242417.070	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR71	SE242417.071	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR72	SE242417.072	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR73	SE242417.073	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR74	SE242417.074	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR75	SE242417.075	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR76	SE242417.076	LB270328	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	03 Feb 2023
CR77	SE242417.077	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR78	SE242417.078	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR79	SE242417.079	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR80	SE242417.080	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR81	SE242417.081	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR82	SE242417.082	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR83	SE242417.083	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR84	SE242417.084	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR85	SE242417.085	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR86	SE242417.086	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR87	SE242417.087	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR88	SE242417.088	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR89	SE242417.089	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR90	SE242417.090	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR91	SE242417.091	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR92	SE242417.092	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR93	SE242417.093	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR94	SE242417.094	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR95	SE242417.095	LB270329	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR96	SE242417.096	LB270347	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR97	SE242417.097	LB270347	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR98	SE242417.098	LB270347	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR99	SE242417.099	LB270347	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR100	SE242417.100	LB270347	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023

Moisture Content — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR1	SE242417.001	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR2	SE242417.002	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR3	SE242417.003	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR4	SE242417.004	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR5	SE242417.005	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR6	SE242417.006	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR7	SE242417.007	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR8	SE242417.008	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR9	SE242417.009	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR10	SE242417.010	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR11	SE242417.011	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR12	SE242417.012	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242417 R0

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Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content (continued) Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR13	SE242417.013	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR14	SE242417.014	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR15	SE242417.015	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR16	SE242417.016	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR17	SE242417.017	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR18	SE242417.018	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR19	SE242417.019	LB270338	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR20	SE242417.020	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR21	SE242417.021	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR22	SE242417.022	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR23	SE242417.023	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR24	SE242417.024	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR25	SE242417.025	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR26	SE242417.026	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR27	SE242417.027	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR28	SE242417.028	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR29	SE242417.029	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR30	SE242417.030	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR31	SE242417.031	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR32	SE242417.032	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR33	SE242417.033	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR34	SE242417.034	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR35	SE242417.035	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR36	SE242417.036	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR37	SE242417.037	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR38	SE242417.038	LB270339	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR39	SE242417.039	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR40	SE242417.040	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR41	SE242417.041	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR42	SE242417.042	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR43	SE242417.043	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR44	SE242417.044	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR45	SE242417.045	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR46	SE242417.046	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR47	SE242417.047	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR48	SE242417.048	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR49	SE242417.049	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR50	SE242417.050	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR51	SE242417.051	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR52	SE242417.052	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR53	SE242417.053	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR54	SE242417.054	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR55	SE242417.055	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR56	SE242417.056	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR57	SE242417.057	LB270340	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR58	SE242417.058	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR59	SE242417.059	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR60	SE242417.060	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR61	SE242417.061	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR62	SE242417.062	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR63	SE242417.063	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR64	SE242417.064	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR65	SE242417.065	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR66	SE242417.066	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR67	SE242417.067	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR68	SE242417.068	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR69	SE242417.069	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR70	SE242417.070	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR71	SE242417.071	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR72	SE242417.072	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242417 R0

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Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content (continued) Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR73	SE242417.073	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR74	SE242417.074	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR75	SE242417.075	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR76	SE242417.076	LB270341	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	03 Feb 2023
CR77	SE242417.077	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR78	SE242417.078	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR79	SE242417.079	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR80	SE242417.080	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR81	SE242417.081	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR82	SE242417.082	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR83	SE242417.083	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR84	SE242417.084	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR85	SE242417.085	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR86	SE242417.086	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR87	SE242417.087	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR88	SE242417.088	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR89	SE242417.089	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR90	SE242417.090	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR91	SE242417.091	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR92	SE242417.092	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR93	SE242417.093	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR94	SE242417.094	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR95	SE242417.095	LB270342	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR96	SE242417.096	LB270351	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR97	SE242417.097	LB270351	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR98	SE242417.098	LB270351	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR99	SE242417.099	LB270351	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR100	SE242417.100	LB270351	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR4	SE242417.004	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR8	SE242417.008	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR12	SE242417.012	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR16	SE242417.016	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR20	SE242417.020	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR24	SE242417.024	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR28	SE242417.028	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR32	SE242417.032	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR36	SE242417.036	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR40	SE242417.040	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR44	SE242417.044	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR48	SE242417.048	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR52	SE242417.052	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR56	SE242417.056	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR60	SE242417.060	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR64	SE242417.064	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR68	SE242417.068	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR72	SE242417.072	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR76	SE242417.076	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR80	SE242417.080	LB270133	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	03 Feb 2023
CR84	SE242417.084	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR88	SE242417.088	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR92	SE242417.092	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR96	SE242417.096	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR100	SE242417.100	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023

pH in soil (1:5) Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR44	SE242417.044	LB270548	25 Jan 2023	31 Jan 2023	01 Feb 2023	03 Feb 2023†	04 Feb 2023	03 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242417 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR1	SE242417.001	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR2	SE242417.002	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR3	SE242417.003	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR4	SE242417.004	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR5	SE242417.005	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR6	SE242417.006	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR7	SE242417.007	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR8	SE242417.008	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR9	SE242417.009	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR10	SE242417.010	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR11	SE242417.011	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR12	SE242417.012	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR13	SE242417.013	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR14	SE242417.014	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR15	SE242417.015	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR16	SE242417.016	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR17	SE242417.017	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR18	SE242417.018	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR19	SE242417.019	LB270184	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR20	SE242417.020	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR21	SE242417.021	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR22	SE242417.022	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR23	SE242417.023	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR24	SE242417.024	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR25	SE242417.025	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR26	SE242417.026	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR27	SE242417.027	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR28	SE242417.028	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR29	SE242417.029	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR30	SE242417.030	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR31	SE242417.031	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR32	SE242417.032	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR33	SE242417.033	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR34	SE242417.034	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR35	SE242417.035	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR36	SE242417.036	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR37	SE242417.037	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR38	SE242417.038	LB270185	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR39	SE242417.039	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR40	SE242417.040	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR41	SE242417.041	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR42	SE242417.042	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR43	SE242417.043	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR44	SE242417.044	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR45	SE242417.045	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR46	SE242417.046	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR47	SE242417.047	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR48	SE242417.048	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR49	SE242417.049	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR50	SE242417.050	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR51	SE242417.051	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR52	SE242417.052	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR53	SE242417.053	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR54	SE242417.054	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR55	SE242417.055	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR56	SE242417.056	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR57	SE242417.057	LB270186	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	03 Feb 2023
CR58	SE242417.058	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR59	SE242417.059	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR60	SE242417.060	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242417 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR61	SE242417.061	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR62	SE242417.062	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR63	SE242417.063	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR64	SE242417.064	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR65	SE242417.065	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR66	SE242417.066	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR67	SE242417.067	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR68	SE242417.068	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR69	SE242417.069	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR70	SE242417.070	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR71	SE242417.071	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR72	SE242417.072	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR73	SE242417.073	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR74	SE242417.074	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR75	SE242417.075	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR76	SE242417.076	LB270187	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	06 Feb 2023
CR77	SE242417.077	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR78	SE242417.078	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR79	SE242417.079	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR80	SE242417.080	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR81	SE242417.081	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR82	SE242417.082	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR83	SE242417.083	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR84	SE242417.084	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR85	SE242417.085	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR86	SE242417.086	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR87	SE242417.087	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR88	SE242417.088	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR89	SE242417.089	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR90	SE242417.090	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR91	SE242417.091	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR92	SE242417.092	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR93	SE242417.093	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR94	SE242417.094	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR95	SE242417.095	LB270188	25 Jan 2023	31 Jan 2023	24 Jul 2023	01 Feb 2023	24 Jul 2023	07 Feb 2023
CR96	SE242417.096	LB270346	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR97	SE242417.097	LB270346	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR98	SE242417.098	LB270346	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR99	SE242417.099	LB270346	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR100	SE242417.100	LB270346	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023

SGS

SURROGATES

SE242417 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	CR4	SE242417.004	%	60 - 130%	120
	CR8	SE242417.008	%	60 - 130%	104
	CR12	SE242417.012	%	60 - 130%	100
	CR16	SE242417.016	%	60 - 130%	103
	CR20	SE242417.020	%	60 - 130%	103
	CR24	SE242417.024	%	60 - 130%	107
	CR28	SE242417.028	%	60 - 130%	109
	CR32	SE242417.032	%	60 - 130%	100
	CR36	SE242417.036	%	60 - 130%	103
	CR40	SE242417.040	%	60 - 130%	100
	CR44	SE242417.044	%	60 - 130%	96
	CR48	SE242417.048	%	60 - 130%	101
	CR52	SE242417.052	%	60 - 130%	96
	CR56	SE242417.056	%	60 - 130%	101
	CR60	SE242417.060	%	60 - 130%	101
	CR64	SE242417.064	%	60 - 130%	104
	CR68	SE242417.068	%	60 - 130%	109
	CR72	SE242417.072	%	60 - 130%	109
	CR76	SE242417.076	%	60 - 130%	104
	CR80	SE242417.080	%	60 - 130%	99
	CR84	SE242417.084	%	60 - 130%	95
	CR88	SE242417.088	%	60 - 130%	99
	CR92	SE242417.092	%	60 - 130%	103
	CR96	SE242417.096	%	60 - 130%	92
	CR100	SE242417.100	%	60 - 130%	93

SGS

METHOD BLANKS

SE242417 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result
LB270623.001	Exchangeable Sodium, Na	mg/kg	2	-0.8896
	Exchangeable Potassium, K	mg/kg	2	0.4268
	Exchangeable Calcium, Ca	mg/kg	2	-0.1492
	Exchangeable Magnesium, Mg	mg/kg	2	0.0061

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB270325.001	Mercury	mg/kg	0.05	<0.05
LB270326.001	Mercury	mg/kg	0.05	<0.05
LB270327.001	Mercury	mg/kg	0.05	<0.05
LB270328.001	Mercury	mg/kg	0.05	<0.05
LB270329.001	Mercury	mg/kg	0.05	<0.05
LB270347.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270133.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	94
LB270142.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1

SGS

METHOD BLANKS

SE242417 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270142.001		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	96

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB270184.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB270185.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB270186.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB270187.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB270188.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB270346.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

SGS

DUPLICATES

SE242417 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242417.010	LB270325.014	Mercury	mg/kg	0.05	<0.05	<0.05	153	0
SE242417.019	LB270325.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE242417.029	LB270326.014	Mercury	mg/kg	0.05	<0.05	<0.05	170	0
SE242417.038	LB270326.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE242417.048	LB270327.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE242417.057	LB270327.024	Mercury	mg/kg	0.05	0.06	0.06	110	6
SE242417.067	LB270328.014	Mercury	mg/kg	0.05	<0.05	<0.05	149	0
SE242417.076	LB270328.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE242417.086	LB270329.014	Mercury	mg/kg	0.05	<0.05	<0.05	185	0
SE242417.095	LB270329.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE242417.099	LB270347.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE242419.005	LB270347.020	Mercury	mg/kg	0.05	<0.05	0.05	135	6

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242403.004	LB270351.011	% Moisture	%w/w	1	1.2	1.1	118	3
SE242417.010	LB270338.011	% Moisture	%w/w	1	15.2	14.1	37	7
SE242417.019	LB270338.021	% Moisture	%w/w	1	9.4	9.7	40	3
SE242417.029	LB270339.011	% Moisture	%w/w	1	13.7	13.9	37	1
SE242417.038	LB270339.021	% Moisture	%w/w	1	8.8	10.8	40	20
SE242417.048	LB270340.011	% Moisture	%w/w	1	9.6	9.2	41	4
SE242417.057	LB270340.021	% Moisture	%w/w	1	15.9	11.1	37	36
SE242417.067	LB270341.011	% Moisture	%w/w	1	7.9	10.0	41	24
SE242417.076	LB270341.021	% Moisture	%w/w	1	8.8	12.9	39	37
SE242417.086	LB270342.011	% Moisture	%w/w	1	16.1	15.4	36	5
SE242417.095	LB270342.021	% Moisture	%w/w	1	13.5	13.0	38	3
SE242418.005	LB270351.022	% Moisture	%w/w	1	6.9	5.8	46	17
SE242418.010	LB270351.028	% Moisture	%w/w	1	10.7	10.2	40	5

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242417.040	LB270133.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	1
SE242417.080	LB270133.025		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0

SGS

DUPLICATES

SE242417 R0

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The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

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NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued) Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242417.080	LB270133.025		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	1
SE242418.007	LB270142.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	0
SE242420.036	LB270142.024		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0

SGS

DUPLICATES

SE242417 R0

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The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.036	LB270142.024	Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.14	30	5

pH in soil (1:5) — Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242465.003	LB270548.020	pH	pH Units	0.1	5.6	5.6	32	0
SE242575.002	LB270548.019	pH	pH Units	0.1	5.7	5.6	32	2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242417.010	LB270184.014	Arsenic, As	mg/kg	1	27	22	34	22
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	177	0
		Chromium, Cr	mg/kg	0.5	9.4	7.9	36	18
		Copper, Cu	mg/kg	0.5	31	30	32	1
		Nickel, Ni	mg/kg	0.5	1.7	1.6	61	3
		Lead, Pb	mg/kg	1	83	83	31	0
		Zinc, Zn	mg/kg	2	13	13	45	1
SE242417.019	LB270184.024	Arsenic, As	mg/kg	1	<1	1	130	16
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.1	7.9	37	26
		Copper, Cu	mg/kg	0.5	8.1	8.9	36	9
		Nickel, Ni	mg/kg	0.5	1.3	1.3	69	1
		Lead, Pb	mg/kg	1	5	5	50	6
		Zinc, Zn	mg/kg	2	13	11	47	14
SE242417.029	LB270185.014	Arsenic, As	mg/kg	1	2	3	68	11
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	22	24	32	8
		Copper, Cu	mg/kg	0.5	11	10	35	1
		Nickel, Ni	mg/kg	0.5	5.0	5.3	40	5
		Lead, Pb	mg/kg	1	12	13	38	9
		Zinc, Zn	mg/kg	2	110	100	32	3
SE242417.038	LB270185.024	Arsenic, As	mg/kg	1	<1	<1	151	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.7	6.7	37	0

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DUPLICATES

SE242417 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242417.038	LB270185.024	Copper, Cu	mg/kg	0.5	12	12	34	2
		Nickel, Ni	mg/kg	0.5	1.4	1.4	66	1
		Lead, Pb	mg/kg	1	5	5	50	1
		Zinc, Zn	mg/kg	2	11	11	49	1
SE242417.048	LB270186.014	Arsenic, As	mg/kg	1	2	2	85	10
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	17	11	34	43 ②
		Copper, Cu	mg/kg	0.5	32	30	32	4
		Nickel, Ni	mg/kg	0.5	3.4	3.3	45	4
		Lead, Pb	mg/kg	1	9	9	41	3
		Zinc, Zn	mg/kg	2	28	26	37	8
SE242417.057	LB270186.024	Arsenic, As	mg/kg	1	24	25	34	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	8.3	9.8	36	17
		Copper, Cu	mg/kg	0.5	39	50	31	26
		Nickel, Ni	mg/kg	0.5	1.6	1.5	62	6
		Lead, Pb	mg/kg	1	98	75	31	26
		Zinc, Zn	mg/kg	2	18	21	40	14
SE242417.067	LB270187.014	Arsenic, As	mg/kg	1	3	3	60	2
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	29	31	32	7
		Copper, Cu	mg/kg	0.5	67	67	31	0
		Nickel, Ni	mg/kg	0.5	5.5	5.4	39	2
		Lead, Pb	mg/kg	1	18	20	35	8
		Zinc, Zn	mg/kg	2	60	75	33	21
SE242417.076	LB270187.024	Arsenic, As	mg/kg	1	2	2	81	20
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.8	5.6	38	18
		Copper, Cu	mg/kg	0.5	21	20	32	3
		Nickel, Ni	mg/kg	0.5	1.5	1.6	62	1
		Lead, Pb	mg/kg	1	10	10	40	0
		Zinc, Zn	mg/kg	2	14	16	44	10
SE242417.086	LB270188.014	Arsenic, As	mg/kg	1	6	6	48	2
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	18	17	33	3
		Copper, Cu	mg/kg	0.5	50	48	31	4
		Nickel, Ni	mg/kg	0.5	4.9	4.9	40	0
		Lead, Pb	mg/kg	1	26	26	34	2
		Zinc, Zn	mg/kg	2	30	30	37	1
SE242417.095	LB270188.024	Arsenic, As	mg/kg	1	<1	<1	168	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.7	6.6	38	2
		Copper, Cu	mg/kg	0.5	3.6	3.8	44	5
		Nickel, Ni	mg/kg	0.5	1.3	1.3	68	2
		Lead, Pb	mg/kg	1	8	8	43	0
		Zinc, Zn	mg/kg	2	8	9	53	14
SE242417.099	LB270346.014	Arsenic, As	mg/kg	1	<1	<1	176	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.9	6.5	37	6
		Copper, Cu	mg/kg	0.5	3.8	3.8	43	1
		Nickel, Ni	mg/kg	0.5	1.4	1.3	66	10
		Lead, Pb	mg/kg	1	8	7	43	6
		Zinc, Zn	mg/kg	2	14	11	46	22

SGS

LABORATORY CONTROL SAMPLES

SE242417 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270623.002	Exchangeable Sodium, Na	meq/100g	0.01	0.19	0.194	80 - 120	96
	Exchangeable Potassium, K	meq/100g	0.01	0.60	0.63	80 - 120	96
	Exchangeable Calcium, Ca	meq/100g	0.01	5.9	6.3	80 - 120	94
	Exchangeable Magnesium, Mg	meq/100g	0.02	1.0	1.11	80 - 120	93

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270325.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	113
LB270326.002	Mercury	mg/kg	0.05	0.26	0.2	70 - 130	128
LB270327.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	114
LB270328.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	112
LB270329.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	113
LB270347.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	116

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270133.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	81
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	85
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	81
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	78
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	91
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	69
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	97
LB270142.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	89
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	87
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	93
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	79
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130	84

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270548.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270184.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	3.5	4.81	70 - 130	74
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	106
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	111
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	270	273	80 - 120	101
LB270185.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	109
	Cadmium, Cd	mg/kg	0.3	3.5	4.81	70 - 130	72
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	104
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	111
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	98
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	270	273	80 - 120	101
LB270186.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	4.0	4.81	70 - 130	84
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	102
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	111
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101
LB270187.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	108
	Cadmium, Cd	mg/kg	0.3	3.5	4.81	70 - 130	72
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	104

LABORATORY CONTROL SAMPLES

SE242417 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270187.002	Copper, Cu	mg/kg	0.5	320	290	80 - 120	110
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	98
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	270	273	80 - 120	99
LB270188.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	108
	Cadmium, Cd	mg/kg	0.3	4.2	4.81	70 - 130	87
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	106
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	103
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	280	273	80 - 120	103
LB270346.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	103
	Cadmium, Cd	mg/kg	0.3	4.0	4.81	70 - 130	84
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	108
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	103
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	89	89.9	80 - 120	99
	Zinc, Zn	mg/kg	2	270	273	80 - 120	99

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MATRIX SPIKES

SE242417 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242402.001	LB270347.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	107
SE242417.001	LB270325.004	Mercury	mg/kg	0.05	0.29	0.05	0.2	117
SE242417.020	LB270326.004	Mercury	mg/kg	0.05	0.25	<0.05	0.2	118
SE242417.039	LB270327.004	Mercury	mg/kg	0.05	0.27	<0.05	0.2	129
SE242417.058	LB270328.004	Mercury	mg/kg	0.05	0.28	<0.05	0.2	118
SE242417.077	LB270329.004	Mercury	mg/kg	0.05	0.26	<0.05	0.2	117

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242417.004	LB270133.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	86
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	90
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	85
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	83
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	97
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.1	<0.1	0.2	73
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.18	-	101
SE242417.084	LB270142.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	91
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	92
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	89
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	87
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	96
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-

SGS

MATRIX SPIKES

SE242417 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242417.084	LB270142.004		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	89
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	-	93

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242402.001	LB270346.004	Arsenic, As	mg/kg	1	49	6	50	86
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	88
		Chromium, Cr	mg/kg	0.5	48	2.5	50	91
		Copper, Cu	mg/kg	0.5	47	2.2	50	90
		Nickel, Ni	mg/kg	0.5	46	0.7	50	91
		Lead, Pb	mg/kg	1	54	19	50	71
		Zinc, Zn	mg/kg	2	54	17	50	74
SE242417.001	LB270184.004	Arsenic, As	mg/kg	1	48	3	50	88
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	88
		Chromium, Cr	mg/kg	0.5	56	10	50	90
		Copper, Cu	mg/kg	0.5	60	15	50	91
		Nickel, Ni	mg/kg	0.5	48	3.5	50	88
		Lead, Pb	mg/kg	1	60	20	50	80
		Zinc, Zn	mg/kg	2	100	78	50	50 ◎
SE242417.020	LB270185.004	Arsenic, As	mg/kg	1	49	2	50	94
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	91
		Chromium, Cr	mg/kg	0.5	55	8.2	50	93
		Copper, Cu	mg/kg	0.5	58	8.6	50	99
		Nickel, Ni	mg/kg	0.5	48	1.5	50	93
		Lead, Pb	mg/kg	1	53	7	50	93
		Zinc, Zn	mg/kg	2	59	13	50	92
SE242417.039	LB270186.004	Arsenic, As	mg/kg	1	48	2	50	92
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	88
		Chromium, Cr	mg/kg	0.5	55	6.6	50	96
		Copper, Cu	mg/kg	0.5	61	12	50	97
		Nickel, Ni	mg/kg	0.5	46	1.1	50	90
		Lead, Pb	mg/kg	1	50	4	50	91
		Zinc, Zn	mg/kg	2	57	10	50	94
SE242417.058	LB270187.004	Arsenic, As	mg/kg	1	57	11	50	93
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	90
		Chromium, Cr	mg/kg	0.5	54	6.9	50	94
		Copper, Cu	mg/kg	0.5	82	37	50	90
		Nickel, Ni	mg/kg	0.5	47	1.8	50	91
		Lead, Pb	mg/kg	1	85	43	50	84
		Zinc, Zn	mg/kg	2	65	18	50	94
SE242417.077	LB270188.004	Arsenic, As	mg/kg	1	50	3	50	95
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	91
		Chromium, Cr	mg/kg	0.5	56	7.0	50	98
		Copper, Cu	mg/kg	0.5	67	18	50	98
		Nickel, Ni	mg/kg	0.5	50	1.8	50	97
		Lead, Pb	mg/kg	1	58	12	50	92
		Zinc, Zn	mg/kg	2	64	15	50	96

MATRIX SPIKE DUPLICATES

SE242417 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

SGS

FOOTNOTES

SE242417 R0

S

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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source: Sydney pdf page: 8 SGS Ref: SE242417_COC

Chain of Custody Form – Ref 15156

Sheet 1 of 5

Ref: 15156
Investigator: Envirowest Consulting
9 Cameron Place
PO Box 8158
ORANGE NSW 2800
Telephone: (02) 6361 4954

Email: [redacted]
Contact Person: Felipe Canavez
Invoice: accounts@envirowest.net.au

Laboratory: SGS SYDNEY
16/33 Maddox Street
ALEXANDRIA NSW 2015

Quotation #: Envir_70119_2019
Courier/CN: Grants Express

	Sample ID	Container*	Sampling Date/Time	Sample matrix: Water	Sample matrix: Soil	Sample matrix: Sludge	Sample preservation: Ccol	Sample preservation: HNO3/HCl	Sample preservation: Unpreserved	Analysis – SGS Method Code: CL2T (CL2T (8 metals))	OCP (OCP)	pH (pH)	CEC (Cation exchange capacity)	Clay content (Clay content)
1	CR1	A	25/01/2023		X		X			X				
2	CR2	A	25/01/2023		X		X			X				
3	CR3	A	25/01/2023		X		X			X				
4	CR4	A	25/01/2023		X		X			X	X			
5	CR5	A	25/01/2023		X		X			X				
6	CR6	A	25/01/2023		X		X			X				
7	CR7	A	25/01/2023		X		X			X				
8	CR8	A	25/01/2023		X		X			X	X			
9	CR9	A	25/01/2023		X		X			X				
10	CR10	A	25/01/2023		X		X			X				
11	CR11	A	25/01/2023		X		X			X				
12	CR12	A	25/01/2023		X		X			X	X			
13	CR13	A	25/01/2023		X		X			X				
14	CR14	A	25/01/2023		X		X			X				
15	CR15	A	25/01/2023		X		X			X				
16	CR16	A	25/01/2023		X		X			X	X			
17	CR17	A	25/01/2023		X		X			X				
18	CR18	A	25/01/2023		X		X			X				
19	CR19	A	25/01/2023		X		X			X				
20	CR20	A	25/01/2023		X		X			X	X			

SGS EHS Sydney COC
SE242417

Investigator: I attest that the proper field sampling proced25/01/2023ures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 25/01/2023 Time: 10.30

Relinquished by: (print and signature) Virginia Bragg [redacted] Date: 30/01/2023 Time 1500

Received by: (print and signature [redacted] Date 31/1/23 Time @10.50

Please return completed form to Envirowest Consulting, *A = Solvent rinsed glass jar with Teflon lined lid and green label, B= Plastic with green label, C= Amber with green label, D= Vial with white label, E= Plastic with red label

Chain of Custody Form – Ref 15156

Ref:	**15156**		**Sample matrix**			**Sample preservation**			**Analysis**					
Investigator:	Envirowest Consulting 9 Cameron Place PO Box 8158 ORANGE NSW 2800								**SGS Method Code**					
Telephone:	(02) 6361 4954								**CL2T**	**OCP**	**pH**	**CEC**	**Clay content**	
Email:	[redacted]													
Contact Person:	Felipe Canavez													
Invoice:	accounts@envirowest.net.au													
Laboratory:	SGS SYDNEY 16/33 Maddox Street ALEXANDRIA NSW 2015		Water	Soil	Sludge	Cool	HNO3/HCl	Unpre-served	CL2T (8 metals)	OCP	pH	Cation exchange capacity	Clay content	
Quotation #:	Envir_70119_2019													
Courier/CN:	Grants Express													
	Sample ID	**Container***	**Sampling Date/Time**											
21	CR21	A	25/01/2023		X		X			X				
22	CR22	A	25/01/2023		X		X			X				
23	CR23	A	25/01/2023		X		X			X				
24	CR24	A	25/01/2023		X		X			X	X			
25	CR25	A	25/01/2023		X		X			X				
26	CR26	A	25/01/2023		X		X			X				
27	CR27	A	25/01/2023		X		X			X				
28	CR28	A	25/01/2023		X		X			X	X			
29	CR29	A	25/01/2023		X		X			X				
30	CR30	A	25/01/2023		X		X			X				
31	CR31	A	25/01/2023		X		X			X				
32	CR32	A	25/01/2023		X		X			X	X			
33	CR33	A	25/01/2023		X		X			X				
34	CR34	A	25/01/2023		X		X			X				
35	CR35	A	25/01/2023		X		X			X				
36	CR36	A	25/01/2023		X		X			X	X			
37	CR37	A	25/01/2023		X		X			X				
38	CR38	A	25/01/2023		X		X			X				
39	CR39	A	25/01/2023		X		X			X				
40	CR40	A	25/01/2023		X		X			X	X			

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 25/01/2023 Time: 10.30

Relinquished by: Virginia Bragg [redacted] Date: 30/01/2023 Time 1500

Received by: [redacted] Date 31/1/23 Time @ 10.50

Please return completed form to Envirowest Consulting, *A = Solvent rinsed glass jar with Teflon lined lid and green label, B= Plastic with green label, C= Amber with green label, D= Vial with white label, E= Plastic with red label

Chain of Custody Form – Ref 15156

Ref:	**15156**													
Investigator:	Envirowest Consulting 9 Cameron Place PO Box 8158 ORANGE NSW 2800													
Telephone:	(02) 6361 4954													
Email:	[redacted]													
Contact Person:	Felipe Canavez													
Invoice:	accounts@envirowest.net.au													
Laboratory:	SGS SYDNEY 16/33 Maddox Street ALEXANDRIA NSW 2015													
Quotation #:	Envir_70119_2019													
Courier/CN:	Grants Express													
	Sample matrix				**Sample preservation**			**Analysis**						
								SGS Method Code						
								CL2T	**OCP**	**pH**	**CEC**	**Clay content**		
	Sample ID	**Container***	**Sampling Date/Time**	Water	Soil	Sludge	Cool	HNO3/HCl	Unpre-served	CL2T (8 metals)	OCP	pH	Cation exchange capacity	Clay content		
41	CR41	A	25/01/2023		X		X			X						
42	CR42	A	25/01/2023		X		X			X						
43	CR43	A	25/01/2023		X		X			X						
44	CR44	A	25/01/2023		X		X			X	X	X	X	X		
45	CR45	A	25/01/2023		X		X			X						
46	CR46	A	25/01/2023		X		X			X						
47	CR47	A	25/01/2023		X		X			X						
48	CR48	A	25/01/2023		X		X			X	X					
49	CR49	A	25/01/2023		X		X			X						
50	CR50	A	25/01/2023		X		X			X						
51	CR51	A	25/01/2023		X		X			X						
52	CR52	A	25/01/2023		X		X			X	X					
53	CR53	A	25/01/2023		X		X			X						
54	CR54	A	25/01/2023		X		X			X						
55	CR55	A	25/01/2023		X		X			X						
56	CR56	A	25/01/2023		X		X			X	X					
57	CR57	A	25/01/2023		X		X			X						
58	CR58	A	25/01/2023		X		X			X						
59	CR59	A	25/01/2023		X		X			X						
60	CR60	A	25/01/2023		X		X			X	X					

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 25/01/2023 Time: 10.30

Relinquished by: (print and signature) Virginia Bragg [redacted] Date: 30/01/2023 Time 1500

Received by: (print and signature) [redacted] Date 31/1/23 Time @ 10.50

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Chain of Custody Form – Ref 15156

Ref:	**15156**													
Investigator:	Envirowest Consulting 9 Cameron Place PO Box 8158 ORANGE NSW 2800		**Sample matrix**			**Sample preservation**			**Analysis**					
Telephone:	(02) 6361 4954								**SGS Method Code**					
Email:	[redacted]								**CL2T**	**OCP**	**pH**	**CEC**	**Clay content**	
Contact Person:	Felipe Canavez													
Invoice:	accounts@envirowest.net.au													
Laboratory:	SGS SYDNEY 16/33 Maddox Street ALEXANDRIA NSW 2015		Water	Soil	Sludge	Cool	HNO3/HCl	Unpre-served	CL2T (8 metals)	OCP	pH	Cation exchange capacity	Clay content	
Quotation #:	Envir_70119_2019													
Courier/CN:	Grants Express													
Sample ID	**Container***	**Sampling Date/Time**												
CR61	A	25/01/2023		X		X			X					
CR62	A	25/01/2023		X		X			X					
CR63	A	25/01/2023		X		X			X					
CR64	A	25/01/2023		X		X			X	X				
CR65	A	25/01/2023		X		X			X					
CR66	A	25/01/2023		X		X			X					
CR67	A	25/01/2023		X		X			X					
CR68	A	25/01/2023		X		X			X	X				
CR69	A	25/01/2023		X		X			X					
CR70	A	25/01/2023		X		X			X					
CR71	A	25/01/2023		X		X			X					
CR72	A	25/01/2023		X		X			X	X				
CR73	A	25/01/2023		X		X			X					
CR74	A	25/01/2023		X		X			X					
CR75	A	25/01/2023		X		X			X					
CR76	A	25/01/2023		X		X			X	X				
CR77	A	25/01/2023		X		X			X					
CR78	A	25/01/2023		X		X			X					
CR79	A	25/01/2023		X		X			X					
CR80	A	25/01/2023		X		X			X	X				
Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.						Sampler name: Felipe Canavez Date: 25/01/2023 Time: 10.30								
Relinquished by: (print and signature)	Virginia Brada [redacted]	Date: 30/01/2023 Time 1500				Received by: (print and signature)	[redacted]	Date Time 31/1/23 @ 10.50						

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Chain of Custody Form – Ref 15156

Sheet 5 of 5

Ref:	**15156**		**Sample matrix**			**Sample preservation**			**Analysis**				
Investigator:	Envirowest Consulting 9 Cameron Place PO Box 8158 ORANGE NSW 2800								**SGS Method Code**				
Telephone:	(02) 6361 4954								**CL2T**	**OCP**	**pH**	**CEC**	**Clay content**
Email:	[redacted]												
Contact Person:	Felipe Canavez												
Invoice:	accounts@envirowest.net.au												
Laboratory:	SGS SYDNEY 16/33 Maddox Street ALEXANDRIA NSW 2015		Water	Soil	Sludge	Cool	HNO3/HCl	Unpre-served	CL2T (8 metals)	OCP	pH	Cation exchange capacity	Clay content
Quotation #:	Envir_70119_2019												
Courier/CN:	Grants Express												
Sample ID	**Container***	**Sampling Date/Time**											
81 CR81	A	25/01/2023		X		X			X				
82 CR82	A	25/01/2023		X		X			X				
83 CR83	A	25/01/2023		X		X			X				
84 CR84	A	25/01/2023		X		X			X	X			
85 CR85	A	25/01/2023		X		X			X				
86 CR86	A	25/01/2023		X		X			X				
87 CR87	A	25/01/2023		X		X			X				
88 CR88	A	25/01/2023		X		X			X	X			
89 CR89	A	25/01/2023		X		X			X				
90 CR90	A	25/01/2023		X		X			X				
91 CR91	A	25/01/2023		X		X			X				
92 CR92	A	25/01/2023		X		X			X	X			
93 CR93	A	25/01/2023		X		X			X				
94 CR94	A	25/01/2023		X		X			X				
95 CR95	A	25/01/2023		X		X			X				
96 CR96	A	25/01/2023		X		X			X	X			
97 CR97	A	25/01/2023		X		X			X				
98 CR98	A	25/01/2023		X		X			X				
99 CR99	A	25/01/2023		X		X			X				
100 CR100	A	25/01/2023		X		X			X	X			

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 25/01/2023 Time: 10.30

Relinquished by: (print and signature) Virginia Bragg [redacted] Date: 30/01/2023 Time 1500

Received by: (print and signature) [redacted] Date 31/1/23 Time @ 10·50

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Admin	Manager	Anthony Nilsson
Client	SGS I&E SYDNEY	Laboratory	SGS Cairns Environmental
Address	5058 201 I&E HSE SYDNEY (EX 5258) UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015	Address	Unit 2, 58 Comport St Portsmith QLD 4870
Telephone	[redacted]	Telephone	[redacted]
Facsimile		Facsimile	
Email		Email	
Project	**15156**	SGS Reference	**CE164439 R0**
Order Number	**SE242417**	Date Received	02 Feb 2023
Samples	1	Date Reported	07 Feb 2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146/19038)

SIGNATORIES

[redacted]
Anthony NILSSON
Operations Manager

SGS

ANALYTICAL REPORT

CE164439 R0

Parameter	Units	LOR	Sample Number: CE164439.044 Sample Matrix: Soil Sample Date: 25 Jan 2023 Sample Name: SE242417.044
Moisture Content Method: AN002 Tested: 6/2/2023			
% Moisture	%w/w	1	11
Particle sizing of soils by sieving Method: AN005 Tested: 7/2/2023			
Passing 75µm	%w/w	1	91
Retained 75µm	%w/w	1	9
Particle sizing of soils <75µm by hydrometer Method: AN005 Tested: 7/2/2023			
Clay (<0.002mm)	%w/w	0.1	3.0

SGS

QC SUMMARY

CE164439 R0

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

No QC samples were reported for this job.

SGS

METHOD SUMMARY

CE164439 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.

SGS

FOOTNOTES

CE164439 R0

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156**
Order Number	**15156**
Samples	100

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242417RE R0**
Date Received	16/3/2023
Date Reported	22/3/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

[redacted]
Dong LIANG
Metals/Inorganics Team Leader

[redacted]
Shane MCDERMOTT
Inorganic/Metals Chemist

SGS

ANALYTICAL RESULTS SE242417RE R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 16/3/2023

PARAMETER	UOM	LOR	CR1 SOIL - 25/1/2023 SE242417RE.001	CR21 SOIL - 25/1/2023 SE242417RE.021	CR41 SOIL - 25/1/2023 SE242417RE.041	CR61 SOIL - 25/1/2023 SE242417RE.061	CR81 SOIL - 25/1/2023 SE242417RE.081
Arsenic, As	mg/kg	1	3	59	2	1	6
Cadmium, Cd	mg/kg	0.3	<0.3	0.7	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.3	16	7.0	11	16
Copper, Cu	mg/kg	0.5	13	120	18	35	43
Lead, Pb	mg/kg	1	14	210	9	7	26
Nickel, Ni	mg/kg	0.5	3.0	3.6	2.1	2.7	4.1
Zinc, Zn	mg/kg	2	84	40	21	15	16

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METHOD SUMMARY

SE242417RE R0

METHOD	METHODOLOGY SUMMARY
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242417RE R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
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Facsimile	
Email	
Project	**15156**
Order Number	**15156**
Samples	100

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242417RE R0**
Date Received	16 Mar 2023
Date Reported	22 Mar 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Sample counts by matrix	5 Soil	Type of documentation received	Email
Date documentation received	16/3/2023@11:47an	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	21.7°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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HOLDING TIME SUMMARY

SE242417RE R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR1	SE242417RE.001	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
CR21	SE242417RE.021	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
CR41	SE242417RE.041	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
CR61	SE242417RE.061	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
CR81	SE242417RE.081	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023

SURROGATES

SE242417RE R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

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METHOD BLANKS

SE242417RE R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB274159.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

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DUPLICATES

SE242417RE R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420RE.02	LB274159.014	Arsenic, As	mg/kg	1	1.47444	1.4698718699	98	0
6		Cadmium, Cd	mg/kg	0.3	0.07304	0.0707004878	200	0
		Chromium, Cr	mg/kg	0.5	12.80576	14.569537560	34	13
		Copper, Cu	mg/kg	0.5	39.72408	38.172153495	31	4
		Nickel, Ni	mg/kg	0.5	2.9502	2.7525183739	48	7
		Lead, Pb	mg/kg	1	7.56492	7.4702484552	43	1
		Zinc, Zn	mg/kg	2	13.4596	13.161637235	45	2
SE242420RE.02	LB274159.017	Arsenic, As	mg/kg	1	0.9262809917	0.8241322314	144	0
8		Cadmium, Cd	mg/kg	0.3	0.0396694214	0.0247933884	200	0
		Chromium, Cr	mg/kg	0.5	6.2885950413	6.3535537190	38	1
		Copper, Cu	mg/kg	0.5	2.9018181818	2.9608264462	47	2
		Nickel, Ni	mg/kg	0.5	1.2411570247	1.2976859504	69	4
		Lead, Pb	mg/kg	1	7.0824793388	7.2471074380	44	2
		Zinc, Zn	mg/kg	2	11.162975206	11.669256198	48	4

LABORATORY CONTROL SAMPLES

SE242417RE R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB274159.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	5.2	4.81	70 - 130	109
	Chromium, Cr	mg/kg	0.5	44	38.31	80 - 120	116
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	90	89.9	80 - 120	100
	Zinc, Zn	mg/kg	2	280	273	80 - 120	102

MATRIX SPIKES

SE242417RE R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242417RE.0	LB274159.004	Arsenic, As	mg/kg	1	49	3	50	93
01		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	56	8.3	50	95
		Copper, Cu	mg/kg	0.5	59	13	50	93
		Nickel, Ni	mg/kg	0.5	50	3.0	50	95
		Lead, Pb	mg/kg	1	58	14	50	87
		Zinc, Zn	mg/kg	2	110	84	50	43 ⓖ

MATRIX SPIKE DUPLICATES

SE242417RE R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

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FOOTNOTES

SE242417RE R0

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id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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Hi GBS team.

Please book this in as RE job.
Thanks.

Matthew Tyler
Environment, Health & Safety
Client Services

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015

From: Felipe Canavez <[redacted]
Sent: Thursday, 16 March 2023 11:47 AM
To: AU.Environmental.Sydney, AU (Sydney) <[redacted]
Cc: AU.SampleReceipt.Sydney, AU (Sydney) <[redacted]
Subject: [EXTERNAL] RE: Report Job SE242417, your reference 15156, order number 15156

[redacted]

Hi,

Can I have the samples CR1, CR21, CR41, CR61 and CR81 reanalysed for the suite CL1T please?

Standard turnaround time.

Thank you,

Felipe Canavez
Environmental Geologist

Envirowest Consulting Pty Ltd
9 Cameron Place
PO Box 8158
Orange NSW 2800
ph. 02 6361 4954
[redacted]
www.envirowest.net.au

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From: [redacted]
Sent: Tuesday, February 7, 2023 6:04 PM
To: admin [redacted] Felipe Canavez [redacted]
Subject: Report Job SE242417, your reference 15156, order number 15156

Dear Valued Customer,

Please find attached the report for SGS job SE242417, your reference 15156, order number 15156.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420 R0**
Date Received	31/1/2023
Date Reported	7/2/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Clay Content subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. Report No. CE164440

SIGNATORIES

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Shane MCDERMOTT
Inorganic/Metals Chemist

[redacted]
Teresa NGUYEN
Organic Chemist

SGS

ANALYTICAL RESULTS SE242420 R0

VOC's in Soil [AN433] Tested: 31/1/2023

PARAMETER	UOM	LOR	HS1 SOIL - 25/1/23 10:30 SE242420.030	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034
Benzene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

SGS

ANALYTICAL RESULTS SE242420 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 31/1/2023

PARAMETER	UOM	LOR	HS1 SOIL - 25/1/23 10:30 SE242420.030	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

SGS

ANALYTICAL RESULTS SE242420 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 31/1/2023

PARAMETER	UOM	LOR	HS1 SOIL - 25/1/23 10:30 SE242420.030	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034
TRH C10-C14	mg/kg	20	<20	69	<20	47	<20
TRH C15-C28	mg/kg	45	130	9300	<45	880	120
TRH C29-C36	mg/kg	45	84	14000	<45	1100	150
TRH C37-C40	mg/kg	100	<100	5400	<100	140	<100
TRH >C10-C16	mg/kg	25	<25	110	<25	61	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	110	<25	61	<25
TRH >C16-C34 (F3)	mg/kg	90	180	19000	<90	1800	240
TRH >C34-C40 (F4)	mg/kg	120	<120	8400	<120	330	<120
TRH C10-C36 Total	mg/kg	110	210	23000	<110	2100	280
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	27000	<210	2200	240

SGS

ANALYTICAL RESULTS SE242420 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 31/1/2023

PARAMETER	UOM	LOR	HS1 SOIL - 25/1/23 10:30 SE242420.030	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	0.3	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	0.2	<0.1	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.4	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	0.3	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	0.4	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	0.3	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	1.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	1.8	<0.8	<0.8	<0.8

SGS

ANALYTICAL RESULTS SE242420 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023

PARAMETER	UOM	LOR	CR104 SOIL - 25/1/23 10:30 SE242420.004	CR108 SOIL - 25/1/23 10:30 SE242420.008	CR112 SOIL - 25/1/23 10:30 SE242420.012	CR116 SOIL - 25/1/23 10:30 SE242420.016	CR120 SOIL - 25/1/23 10:30 SE242420.020
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS

SE242420 R0

OC Pesticides in Soil [AN420] Tested: 31/1/2023 (continued)

PARAMETER	UOM	LOR	SL1 SOIL - 25/1/23 10:30 SE242420.035	SL1 SOIL - 25/1/23 10:30 SE242420.036
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1

SGS

ANALYTICAL RESULTS

SE242420 R0

OP Pesticides in Soil [AN420] Tested: 31/1/2023

PARAMETER	UOM	LOR	SL1 SOIL - 25/1/23 10:30 SE242420.035	SL1 SOIL - 25/1/23 10:30 SE242420.036
Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

SGS

ANALYTICAL RESULTS

SE242420 R0

pH in soil (1:5) [AN101] Tested: 6/2/2023

PARAMETER	UOM	LOR	CR109 SOIL - 25/1/23 10:30 SE242420.009
pH	pH Units	0.1	5.5

SGS

ANALYTICAL RESULTS SE242420 R0

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 6/2/2023

PARAMETER	UOM	LOR	CR109 SOIL - 25/1/23 10:30 SE242420.009
Exchangeable Calcium, Ca	mg/kg	2	520
Exchangeable Calcium, Ca	meq/100g	0.01	2.6
Exchangeable Calcium Percentage*	%	0.1	66.6
Exchangeable Potassium, K	mg/kg	2	120
Exchangeable Potassium, K	meq/100g	0.01	0.30
Exchangeable Potassium Percentage*	%	0.1	7.6
Exchangeable Magnesium, Mg	mg/kg	2	110
Exchangeable Magnesium, Mg	meq/100g	0.02	0.88
Exchangeable Magnesium Percentage*	%	0.1	22.5
Exchangeable Sodium, Na	mg/kg	2	29
Exchangeable Sodium, Na	meq/100g	0.01	0.13
Exchangeable Sodium Percentage*	%	0.1	3.2
Cation Exchange Capacity	meq/100g	0.02	3.9

SGS

ANALYTICAL RESULTS SE242420 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 2/2/2023

PARAMETER	UOM	LOR	CR101 SOIL - 25/1/23 10:30 SE242420.001	CR102 SOIL - 25/1/23 10:30 SE242420.002	CR103 SOIL - 25/1/23 10:30 SE242420.003	CR104 SOIL - 25/1/23 10:30 SE242420.004	CR105 SOIL - 25/1/23 10:30 SE242420.005
Arsenic, As	mg/kg	1	1	1	1	<1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.2	7.4	8.5	7.6	10
Copper, Cu	mg/kg	0.5	4.1	3.8	6.8	5.7	15
Lead, Pb	mg/kg	1	6	6	8	7	12
Nickel, Ni	mg/kg	0.5	1.1	1.4	2.9	1.8	2.2
Zinc, Zn	mg/kg	2	16	11	11	8.4	13

PARAMETER	UOM	LOR	CR106 SOIL - 25/1/23 10:30 SE242420.006	CR107 SOIL - 25/1/23 10:30 SE242420.007	CR108 SOIL - 25/1/23 10:30 SE242420.008	CR109 SOIL - 25/1/23 10:30 SE242420.009	CR110 SOIL - 25/1/23 10:30 SE242420.010
Arsenic, As	mg/kg	1	2	62	1	1	7
Cadmium, Cd	mg/kg	0.3	<0.3	0.4	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.5	18	5.9	13	15
Copper, Cu	mg/kg	0.5	12	120	15	45	60
Lead, Pb	mg/kg	1	17	220	9	8	30
Nickel, Ni	mg/kg	0.5	2.9	3.3	1.7	3.0	4.3
Zinc, Zn	mg/kg	2	60	41	22	14	13

PARAMETER	UOM	LOR	CR111 SOIL - 25/1/23 10:30 SE242420.011	CR112 SOIL - 25/1/23 10:30 SE242420.012	CR113 SOIL - 25/1/23 10:30 SE242420.013	CR114 SOIL - 25/1/23 10:30 SE242420.014	CR115 SOIL - 25/1/23 10:30 SE242420.015
Arsenic, As	mg/kg	1	<1	<1	2	4	10
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	0.8	<0.3
Chromium, Cr	mg/kg	0.5	5.4	6.2	9.6	10	20
Copper, Cu	mg/kg	0.5	2.7	4.3	17	50	69
Lead, Pb	mg/kg	1	7	6	61	37	15
Nickel, Ni	mg/kg	0.5	1.2	1.3	8.7	3.7	5.1
Zinc, Zn	mg/kg	2	11	12	97	510	97

PARAMETER	UOM	LOR	CR116 SOIL - 25/1/23 10:30 SE242420.016	CR117 SOIL - 25/1/23 10:30 SE242420.017	CR118 SOIL - 25/1/23 10:30 SE242420.018	CR119 SOIL - 25/1/23 10:30 SE242420.019	CR120 SOIL - 25/1/23 10:30 SE242420.020
Arsenic, As	mg/kg	1	3	<1	1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	6.3	6.5	5.5	5.5
Copper, Cu	mg/kg	0.5	20	16	3.3	2.9	3.2
Lead, Pb	mg/kg	1	51	19	8	8	10
Nickel, Ni	mg/kg	0.5	3.4	2.4	1.3	1.1	1.3
Zinc, Zn	mg/kg	2	480	250	13	11	6.9

SGS

ANALYTICAL RESULTS SE242420 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 2/2/2023

PARAMETER	UOM	LOR	CR121 SOIL - 25/1/23 10:30 SE242420.021	CR122 SOIL - 25/1/23 10:30 SE242420.022	DA1 SOIL - 25/1/23 10:30 SE242420.023	DA2 SOIL - 25/1/23 10:30 SE242420.024	DA3 SOIL - 25/1/23 10:30 SE242420.025
Arsenic, As	mg/kg	1	<1	<1	2	1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	6.0	5.5	11	9.9	7.6
Copper, Cu	mg/kg	0.5	5.0	5.8	8.7	6.1	6.2
Lead, Pb	mg/kg	1	9	8	8	11	8
Nickel, Ni	mg/kg	0.5	1.9	2.0	2.6	2.1	2.2
Zinc, Zn	mg/kg	2	12	10	17	28	15

PARAMETER	UOM	LOR	DA4 SOIL - 25/1/23 10:30 SE242420.026	DA5 SOIL - 25/1/23 10:30 SE242420.027	DA6 SOIL - 25/1/23 10:30 SE242420.028	DA7 SOIL - 25/1/23 10:30 SE242420.029	HS1 SOIL - 25/1/23 10:30 SE242420.030
Arsenic, As	mg/kg	1	<1	<1	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.2	5.2	8.0	8.8	8.1
Copper, Cu	mg/kg	0.5	9.4	3.5	3.9	4.5	3.3
Lead, Pb	mg/kg	1	10	15	13	11	9
Nickel, Ni	mg/kg	0.5	1.6	1.6	1.5	1.6	1.3
Zinc, Zn	mg/kg	2	11	7.5	11	8.0	8.2

PARAMETER	UOM	LOR	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034
Arsenic, As	mg/kg	1	<1	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.5	6.9	6.9	5.5
Copper, Cu	mg/kg	0.5	4.2	4.0	3.0	3.0
Lead, Pb	mg/kg	1	8	7	7	7
Nickel, Ni	mg/kg	0.5	1.4	1.3	1.1	1.1
Zinc, Zn	mg/kg	2	13	10	7.4	10

SGS

ANALYTICAL RESULTS SE242420 R0

Mercury in Soil [AN312] Tested: 2/2/2023

PARAMETER	UOM	LOR	CR101 SOIL - 25/1/23 10:30 SE242420.001	CR102 SOIL - 25/1/23 10:30 SE242420.002	CR103 SOIL - 25/1/23 10:30 SE242420.003	CR104 SOIL - 25/1/23 10:30 SE242420.004	CR105 SOIL - 25/1/23 10:30 SE242420.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	0.05	<0.05

PARAMETER	UOM	LOR	CR106 SOIL - 25/1/23 10:30 SE242420.006	CR107 SOIL - 25/1/23 10:30 SE242420.007	CR108 SOIL - 25/1/23 10:30 SE242420.008	CR109 SOIL - 25/1/23 10:30 SE242420.009	CR110 SOIL - 25/1/23 10:30 SE242420.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR111 SOIL - 25/1/23 10:30 SE242420.011	CR112 SOIL - 25/1/23 10:30 SE242420.012	CR113 SOIL - 25/1/23 10:30 SE242420.013	CR114 SOIL - 25/1/23 10:30 SE242420.014	CR115 SOIL - 25/1/23 10:30 SE242420.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR116 SOIL - 25/1/23 10:30 SE242420.016	CR117 SOIL - 25/1/23 10:30 SE242420.017	CR118 SOIL - 25/1/23 10:30 SE242420.018	CR119 SOIL - 25/1/23 10:30 SE242420.019	CR120 SOIL - 25/1/23 10:30 SE242420.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	CR121 SOIL - 25/1/23 10:30 SE242420.021	CR122 SOIL - 25/1/23 10:30 SE242420.022	DA1 SOIL - 25/1/23 10:30 SE242420.023	DA2 SOIL - 25/1/23 10:30 SE242420.024	DA3 SOIL - 25/1/23 10:30 SE242420.025
Mercury	mg/kg	0.05	<0.05	<0.05	0.05	0.09	<0.05

PARAMETER	UOM	LOR	DA4 SOIL - 25/1/23 10:30 SE242420.026	DA5 SOIL - 25/1/23 10:30 SE242420.027	DA6 SOIL - 25/1/23 10:30 SE242420.028	DA7 SOIL - 25/1/23 10:30 SE242420.029	HS1 SOIL - 25/1/23 10:30 SE242420.030
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05

SGS

ANALYTICAL RESULTS

SE242420 R0

Moisture Content [AN002] Tested: 2/2/2023

PARAMETER	UOM	LOR	CR101 SOIL - 25/1/23 10:30 SE242420.001	CR102 SOIL - 25/1/23 10:30 SE242420.002	CR103 SOIL - 25/1/23 10:30 SE242420.003	CR104 SOIL - 25/1/23 10:30 SE242420.004	CR105 SOIL - 25/1/23 10:30 SE242420.005
% Moisture	%w/w	1	16.0	10.5	9.8	20.9	25.2

PARAMETER	UOM	LOR	CR106 SOIL - 25/1/23 10:30 SE242420.006	CR107 SOIL - 25/1/23 10:30 SE242420.007	CR108 SOIL - 25/1/23 10:30 SE242420.008	CR109 SOIL - 25/1/23 10:30 SE242420.009	CR110 SOIL - 25/1/23 10:30 SE242420.010
% Moisture	%w/w	1	15.3	12.9	15.7	16.0	12.2

PARAMETER	UOM	LOR	CR111 SOIL - 25/1/23 10:30 SE242420.011	CR112 SOIL - 25/1/23 10:30 SE242420.012	CR113 SOIL - 25/1/23 10:30 SE242420.013	CR114 SOIL - 25/1/23 10:30 SE242420.014	CR115 SOIL - 25/1/23 10:30 SE242420.015
% Moisture	%w/w	1	11.1	14.1	14.4	9.4	14.6

PARAMETER	UOM	LOR	CR116 SOIL - 25/1/23 10:30 SE242420.016	CR117 SOIL - 25/1/23 10:30 SE242420.017	CR118 SOIL - 25/1/23 10:30 SE242420.018	CR119 SOIL - 25/1/23 10:30 SE242420.019	CR120 SOIL - 25/1/23 10:30 SE242420.020
% Moisture	%w/w	1	11.2	11.9	26.2	15.5	12.1

PARAMETER	UOM	LOR	CR121 SOIL - 25/1/23 10:30 SE242420.021	CR122 SOIL - 25/1/23 10:30 SE242420.022	DA1 SOIL - 25/1/23 10:30 SE242420.023	DA2 SOIL - 25/1/23 10:30 SE242420.024	DA3 SOIL - 25/1/23 10:30 SE242420.025
% Moisture	%w/w	1	9.8	7.2	22.8	11.6	18.8

PARAMETER	UOM	LOR	DA4 SOIL - 25/1/23 10:30 SE242420.026	DA5 SOIL - 25/1/23 10:30 SE242420.027	DA6 SOIL - 25/1/23 10:30 SE242420.028	DA7 SOIL - 25/1/23 10:30 SE242420.029	HS1 SOIL - 25/1/23 10:30 SE242420.030
% Moisture	%w/w	1	6.9	9.1	16.7	23.3	23.2

PARAMETER	UOM	LOR	HS2 SOIL - 25/1/23 10:30 SE242420.031	HS3 SOIL - 25/1/23 10:30 SE242420.032	HS4 SOIL - 25/1/23 10:30 SE242420.033	HS5 SOIL - 25/1/23 10:30 SE242420.034	SL1 SOIL - 25/1/23 10:30 SE242420.035
% Moisture	%w/w	1	21.8	16.8	12.0	18.6	30.9

SGS

ANALYTICAL RESULTS SE242420 R0

Moisture Content [AN002] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	SL1 SOIL - 25/1/23 10:30 SE242420.036
% Moisture	%w/w	1	22.6

SGS

ANALYTICAL RESULTS

SE242420 R0

Particle sizing of soils by sieving [AN005] Tested: 7/2/2023

PARAMETER	UOM	LOR	CR109 SOIL - 25/1/23 10:30 SE242420.009
Passing 75µm*	%w/w	1	95
Retained 75µm*	%w/w	1	5

SGS

ANALYTICAL RESULTS

SE242420 R0

Particle sizing of soils <75µm by hydrometer [AN005] Tested: 7/2/2023

PARAMETER	UOM	LOR	CR109 SOIL - 25/1/23 10:30 SE242420.009
Clay (<0.002mm)*	%w/w	0.1	4.0

SGS

METHOD SUMMARY

SE242420 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN122	Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
AN122	The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100. ESP can be used to categorise the sodicity of the soil as below: ESP < 6% non-sodic ESP 6-15% sodic ESP >15% strongly sodic Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting.
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

SGS

METHOD SUMMARY

SE242420 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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STATEMENT OF QA/QC PERFORMANCE

SE242420 R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420 R0**
Date Received	31 Jan 2023
Date Reported	07 Feb 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	pH in soil (1:5)	1 item

SAMPLE SUMMARY

Sample counts by matrix	36 Soil	Type of documentation received	COC
Date documentation received	31/1/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	21.7C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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SGS

HOLDING TIME SUMMARY

SE242420 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR109	SE242420.009	LB270623	25 Jan 2023	31 Jan 2023	22 Feb 2023	06 Feb 2023	22 Feb 2023	06 Feb 2023

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR101	SE242420.001	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR102	SE242420.002	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR103	SE242420.003	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR104	SE242420.004	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR105	SE242420.005	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR106	SE242420.006	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR107	SE242420.007	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR108	SE242420.008	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR109	SE242420.009	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR110	SE242420.010	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR111	SE242420.011	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR112	SE242420.012	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR113	SE242420.013	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR114	SE242420.014	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR115	SE242420.015	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR116	SE242420.016	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR117	SE242420.017	LB270377	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR118	SE242420.018	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR119	SE242420.019	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR120	SE242420.020	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR121	SE242420.021	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
CR122	SE242420.022	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA1	SE242420.023	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA2	SE242420.024	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA3	SE242420.025	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA4	SE242420.026	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA5	SE242420.027	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA6	SE242420.028	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
DA7	SE242420.029	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
HS1	SE242420.030	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
HS2	SE242420.031	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
HS3	SE242420.032	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
HS4	SE242420.033	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023
HS5	SE242420.034	LB270378	25 Jan 2023	31 Jan 2023	22 Feb 2023	02 Feb 2023	22 Feb 2023	06 Feb 2023

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR101	SE242420.001	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR102	SE242420.002	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR103	SE242420.003	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR104	SE242420.004	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR105	SE242420.005	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR106	SE242420.006	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR107	SE242420.007	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR108	SE242420.008	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR109	SE242420.009	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR110	SE242420.010	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR111	SE242420.011	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR112	SE242420.012	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR113	SE242420.013	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR114	SE242420.014	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR115	SE242420.015	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR116	SE242420.016	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR117	SE242420.017	LB270384	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR118	SE242420.018	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR119	SE242420.019	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242420 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content (continued) — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR120	SE242420.020	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR121	SE242420.021	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
CR122	SE242420.022	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA1	SE242420.023	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA2	SE242420.024	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA3	SE242420.025	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA4	SE242420.026	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA5	SE242420.027	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA6	SE242420.028	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA7	SE242420.029	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS1	SE242420.030	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS2	SE242420.031	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS3	SE242420.032	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS4	SE242420.033	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS5	SE242420.034	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
SL1	SE242420.035	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
SL1	SE242420.036	LB270385	25 Jan 2023	31 Jan 2023	08 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR104	SE242420.004	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR108	SE242420.008	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR112	SE242420.012	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR116	SE242420.016	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
CR120	SE242420.020	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
SL1	SE242420.035	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
SL1	SE242420.036	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR104	SE242420.004	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	07 Feb 2023
CR108	SE242420.008	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	07 Feb 2023
CR112	SE242420.012	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	07 Feb 2023
CR116	SE242420.016	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	07 Feb 2023
CR120	SE242420.020	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	07 Feb 2023
SL1	SE242420.035	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
SL1	SE242420.036	LB270142	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS1	SE242420.030	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS2	SE242420.031	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS3	SE242420.032	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS4	SE242420.033	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS5	SE242420.034	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023

pH in soil (1:5) — Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR109	SE242420.009	LB270622	25 Jan 2023	31 Jan 2023	01 Feb 2023	06 Feb 2023†	07 Feb 2023	06 Feb 2023

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR101	SE242420.001	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR102	SE242420.002	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR103	SE242420.003	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR104	SE242420.004	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR105	SE242420.005	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR106	SE242420.006	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR107	SE242420.007	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR108	SE242420.008	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR109	SE242420.009	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242420 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR110	SE242420.010	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR111	SE242420.011	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR112	SE242420.012	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR113	SE242420.013	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR114	SE242420.014	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR115	SE242420.015	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR116	SE242420.016	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR117	SE242420.017	LB270373	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR118	SE242420.018	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR119	SE242420.019	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR120	SE242420.020	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR121	SE242420.021	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
CR122	SE242420.022	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA1	SE242420.023	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA2	SE242420.024	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA3	SE242420.025	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA4	SE242420.026	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA5	SE242420.027	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA6	SE242420.028	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
DA7	SE242420.029	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
HS1	SE242420.030	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
HS2	SE242420.031	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
HS3	SE242420.032	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
HS4	SE242420.033	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023
HS5	SE242420.034	LB270374	25 Jan 2023	31 Jan 2023	24 Jul 2023	02 Feb 2023	24 Jul 2023	07 Feb 2023

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS1	SE242420.030	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS2	SE242420.031	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS3	SE242420.032	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS4	SE242420.033	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023
HS5	SE242420.034	LB270143	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	12 Mar 2023	06 Feb 2023

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS1	SE242420.030	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS2	SE242420.031	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS3	SE242420.032	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS4	SE242420.033	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS5	SE242420.034	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS1	SE242420.030	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS2	SE242420.031	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS3	SE242420.032	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS4	SE242420.033	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023
HS5	SE242420.034	LB270141	25 Jan 2023	31 Jan 2023	08 Feb 2023	31 Jan 2023	08 Feb 2023	06 Feb 2023

SGS

SURROGATES

SE242420 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	CR104	SE242420.004	%	60 - 130%	94
	CR108	SE242420.008	%	60 - 130%	99
	CR112	SE242420.012	%	60 - 130%	97
	CR116	SE242420.016	%	60 - 130%	93
	CR120	SE242420.020	%	60 - 130%	95
	SL1	SE242420.035	%	60 - 130%	100
	SL1	SE242420.036	%	60 - 130%	98

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	SL1	SE242420.035	%	60 - 130%	102
	SL1	SE242420.036	%	60 - 130%	96
d14-p-terphenyl (Surrogate)	SL1	SE242420.035	%	60 - 130%	106
	SL1	SE242420.036	%	60 - 130%	103

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS1	SE242420.030	%	70 - 130%	103
	HS2	SE242420.031	%	70 - 130%	92
	HS3	SE242420.032	%	70 - 130%	85
	HS4	SE242420.033	%	70 - 130%	94
	HS5	SE242420.034	%	70 - 130%	92
d14-p-terphenyl (Surrogate)	HS1	SE242420.030	%	70 - 130%	107
	HS2	SE242420.031	%	70 - 130%	89
	HS3	SE242420.032	%	70 - 130%	72
	HS4	SE242420.033	%	70 - 130%	99
	HS5	SE242420.034	%	70 - 130%	98
d5-nitrobenzene (Surrogate)	HS1	SE242420.030	%	70 - 130%	115
	HS2	SE242420.031	%	70 - 130%	104
	HS3	SE242420.032	%	70 - 130%	88
	HS4	SE242420.033	%	70 - 130%	103
	HS5	SE242420.034	%	70 - 130%	100

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	HS1	SE242420.030	%	60 - 130%	87
	HS2	SE242420.031	%	60 - 130%	77
	HS3	SE242420.032	%	60 - 130%	96
	HS4	SE242420.033	%	60 - 130%	95
	HS5	SE242420.034	%	60 - 130%	89
d4-1,2-dichloroethane (Surrogate)	HS1	SE242420.030	%	60 - 130%	76
	HS2	SE242420.031	%	60 - 130%	71
	HS3	SE242420.032	%	60 - 130%	87
	HS4	SE242420.033	%	60 - 130%	76
	HS5	SE242420.034	%	60 - 130%	75
d8-toluene (Surrogate)	HS1	SE242420.030	%	60 - 130%	78
	HS2	SE242420.031	%	60 - 130%	71
	HS3	SE242420.032	%	60 - 130%	87
	HS4	SE242420.033	%	60 - 130%	84
	HS5	SE242420.034	%	60 - 130%	79

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	HS1	SE242420.030	%	60 - 130%	87
	HS2	SE242420.031	%	60 - 130%	77
	HS3	SE242420.032	%	60 - 130%	96
	HS4	SE242420.033	%	60 - 130%	95
	HS5	SE242420.034	%	60 - 130%	89
d4-1,2-dichloroethane (Surrogate)	HS1	SE242420.030	%	60 - 130%	76
	HS2	SE242420.031	%	60 - 130%	71
	HS3	SE242420.032	%	60 - 130%	87
	HS4	SE242420.033	%	60 - 130%	76
	HS5	SE242420.034	%	60 - 130%	75

SGS

SURROGATES

SE242420 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	HS1	SE242420.030	%	60 - 130%	78
	HS2	SE242420.031	%	60 - 130%	71
	HS3	SE242420.032	%	60 - 130%	87
	HS4	SE242420.033	%	60 - 130%	84
	HS5	SE242420.034	%	60 - 130%	79

SGS

METHOD BLANKS

SE242420 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result
LB270623.001	Exchangeable Sodium, Na	mg/kg	2	-0.8896
	Exchangeable Potassium, K	mg/kg	2	0.4268
	Exchangeable Calcium, Ca	mg/kg	2	-0.1492
	Exchangeable Magnesium, Mg	mg/kg	2	0.0061

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB270377.001	Mercury	mg/kg	0.05	<0.05
LB270378.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270142.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	96

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270142.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	100
		d14-p-terphenyl (Surrogate)	%	-	101

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB270143.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1

SGS

METHOD BLANKS

SE242420 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270143.001		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	92
		2-fluorobiphenyl (Surrogate)	%	-	85
		d14-p-terphenyl (Surrogate)	%	-	94

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB270373.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB270374.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB270143.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB270141.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	78
		d8-toluene (Surrogate)	%	-	80
		Bromofluorobenzene (Surrogate)	%	-	86
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB270141.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	78

SGS

DUPLICATES

SE242420 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.010	LB270377.014	Mercury	mg/kg	0.05	<0.05	<0.05	153	0
SE242420.017	LB270377.022	Mercury	mg/kg	0.05	<0.05	<0.05	191	0
SE242420.027	LB270378.014	Mercury	mg/kg	0.05	<0.05	<0.05	199	0
SE242420.034	LB270378.022	Mercury	mg/kg	0.05	<0.05	<0.05	162	0

Moisture Content — Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.010	LB270384.011	% Moisture	%w/w	1	12.2	15.5	37	24
SE242420.017	LB270384.019	% Moisture	%w/w	1	11.9	10.6	39	12
SE242420.027	LB270385.011	% Moisture	%w/w	1	9.1	8.7	41	5
SE242420.036	LB270385.021	% Moisture	%w/w	1	22.6	21.3	35	6

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242418.007	LB270142.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	0
SE242420.036	LB270142.024		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0

SGS

DUPLICATES

SE242420 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.036	LB270142.024		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.14	30	5

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.036	LB270142.024		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	5
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242418.003	LB270143.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE242420.034	LB270143.022		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0

SGS

DUPLICATES

SE242420 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.034	LB270143.022	Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

pH in soil (1:5) — Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE240879B.024	LB270622.014	pH	pH Units	0.1	5.4	5.3	32	2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420.010	LB270373.014	Arsenic, As	mg/kg	1	7	7	44	2
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	15	14	33	3
		Copper, Cu	mg/kg	0.5	60	58	31	3
		Nickel, Ni	mg/kg	0.5	4.3	4.2	42	2
		Lead, Pb	mg/kg	1	30	29	33	3
		Zinc, Zn	mg/kg	2	13	13	46	2
SE242420.017	LB270373.022	Arsenic, As	mg/kg	1	<1	1	125	33
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.3	7.1	37	13
		Copper, Cu	mg/kg	0.5	16	20	33	24
		Nickel, Ni	mg/kg	0.5	2.4	3.4	47	34
		Lead, Pb	mg/kg	1	19	20	35	8
		Zinc, Zn	mg/kg	2	250	280	31	10
SE242420.027	LB270374.014	Arsenic, As	mg/kg	1	<1	<1	153	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	5.2	5.5	39	6
		Copper, Cu	mg/kg	0.5	3.5	3.8	44	8
		Nickel, Ni	mg/kg	0.5	1.6	1.7	61	10
		Lead, Pb	mg/kg	1	15	18	36	15
		Zinc, Zn	mg/kg	2	7.5	7.9	56	5
SE242420.034	LB270374.022	Arsenic, As	mg/kg	1	<1	<1	200	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	5.5	6.0	39	9
		Copper, Cu	mg/kg	0.5	3.0	3.2	46	7
		Nickel, Ni	mg/kg	0.5	1.1	1.1	75	5
		Lead, Pb	mg/kg	1	7	7	45	4
		Zinc, Zn	mg/kg	2	10	9.3	51	7

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR

SGS

DUPLICATES

SE242420 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242418.003	LB270143.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	48	130	5
			TRH C29-C36	mg/kg	45	<45	<45	138	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	147	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE242420.034	LB270143.022		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	120	96	71	24
			TRH C29-C36	mg/kg	45	150	120	63	25
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	280	220	75	24
			TRH >C10-C40 Total (F bands)	mg/kg	210	240	<210	129	12
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	240	190	73	24
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242418.003	LB270141.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.1	7.9	50	10
			d8-toluene (Surrogate)	mg/kg	-	7.2	8.0	50	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	8.8	50	10
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE242420.034	LB270141.022	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	7.7	50	2
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.0	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	8.9	50	0
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242418.003	LB270141.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.1	7.9	30	10
			d8-toluene (Surrogate)	mg/kg	-	7.2	8.0	30	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	8.8	30	10
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE242420.034	LB270141.022		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	7.7	30	2
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.0	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	8.9	30	0
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

SGS

LABORATORY CONTROL SAMPLES

SE242420 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270623.002	Exchangeable Sodium, Na	meq/100g	0.01	0.19	0.194	80 - 120	96
	Exchangeable Potassium, K	meq/100g	0.01	0.60	0.63	80 - 120	96
	Exchangeable Calcium, Ca	meq/100g	0.01	5.9	6.3	80 - 120	94
	Exchangeable Magnesium, Mg	meq/100g	0.02	1.0	1.11	80 - 120	93

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270377.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	110
LB270378.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	112

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270142.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	89
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	87
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	93
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	79
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130	84

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270142.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	2	60 - 140	92
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	100
		Dichlorvos	mg/kg	0.5	1.4	2	60 - 140	71
		Ethion	mg/kg	0.2	2.1	2	60 - 140	107
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270143.002		Naphthalene	mg/kg	0.1	4.1	4	60 - 140	102
		Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	102
		Acenaphthene	mg/kg	0.1	4.0	4	60 - 140	99
		Phenanthrene	mg/kg	0.1	3.9	4	60 - 140	98
		Anthracene	mg/kg	0.1	4.0	4	60 - 140	100
		Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	105
		Pyrene	mg/kg	0.1	3.9	4	60 - 140	98
		Benzo(a)pyrene	mg/kg	0.1	4.6	4	60 - 140	114
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	93
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270622.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270373.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	86
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	104
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	90	89.9	80 - 120	100
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100
LB270374.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	103
	Cadmium, Cd	mg/kg	0.3	4.0	4.81	70 - 130	84
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	102
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	98

LABORATORY CONTROL SAMPLES

SE242420 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270374.002		Lead, Pb	mg/kg	1	89	89.9	80 - 120	99
		Zinc, Zn	mg/kg	2	270	273	80 - 120	99

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270143.002		TRH C10-C14	mg/kg	20	47	40	60 - 140	118
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	112
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	92
	TRH F Bands	TRH >C10-C16	mg/kg	25	47	40	60 - 140	118
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	107
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	89

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270141.002	Monocyclic	Benzene	mg/kg	0.1	4.5	5	60 - 140	90
	Aromatic	Toluene	mg/kg	0.1	4.4	5	60 - 140	88
		Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	87
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140	84
		o-xylene	mg/kg	0.1	4.6	5	60 - 140	91
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	10	70 - 130	75
		d8-toluene (Surrogate)	mg/kg	-	7.9	10	70 - 130	79
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	10	70 - 130	94

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270141.002		TRH C6-C10	mg/kg	25	83	92.5	60 - 140	90
		TRH C6-C9	mg/kg	20	72	80	60 - 140	90
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	10	70 - 130	75
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	10	70 - 130	94
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	57	62.5	60 - 140	91

SGS

MATRIX SPIKES

SE242420 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242420.001	LB270377.004	Mercury	mg/kg	0.05	0.24	<0.05	0.2	109
SE242420.018	LB270378.004	Mercury	mg/kg	0.05	0.25	<0.05	0.2	107

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242417.084	LB270142.004	Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	91
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	92
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	89
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	87
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	96
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	89
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
		Total OC VIC EPA	mg/kg	1	1	<1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	-	93

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242401.002	LB270143.004	Naphthalene	mg/kg	0.1	4.1	<0.1	4	102
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.1	<0.1	4	101
		Acenaphthene	mg/kg	0.1	3.9	<0.1	4	99
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.0	<0.1	4	98
		Anthracene	mg/kg	0.1	4.0	<0.1	4	99
		Fluoranthene	mg/kg	0.1	4.3	0.2	4	103
		Pyrene	mg/kg	0.1	4.0	0.2	4	94
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.6	<0.1	4	112
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.6	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.6	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.7	<0.3	-	-
		Total PAH (18)	mg/kg	0.8	33	<0.8	-	-

SGS

MATRIX SPIKES

SE242420 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242401.002	LB270143.004	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	-	95
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.6	-	92
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	-	90

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242420.001	LB270373.004		Arsenic, As	mg/kg	1	47	1	50	92
			Cadmium, Cd	mg/kg	0.3	44	<0.3	50	89
			Chromium, Cr	mg/kg	0.5	53	5.2	50	96
			Copper, Cu	mg/kg	0.5	52	4.1	50	96
			Nickel, Ni	mg/kg	0.5	48	1.1	50	93
			Lead, Pb	mg/kg	1	51	6	50	91
			Zinc, Zn	mg/kg	2	61	16	50	91
SE242420.018	LB270374.004		Arsenic, As	mg/kg	1	44	1	50	86
			Cadmium, Cd	mg/kg	0.3	44	<0.3	50	88
			Chromium, Cr	mg/kg	0.5	54	6.5	50	94
			Copper, Cu	mg/kg	0.5	51	3.3	50	96
			Nickel, Ni	mg/kg	0.5	47	1.3	50	92
			Lead, Pb	mg/kg	1	52	8	50	87
			Zinc, Zn	mg/kg	2	57	13	50	88

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242401.002	LB270143.004		TRH C10-C14	mg/kg	20	48	<20	40	104
			TRH C15-C28	mg/kg	45	45	<45	40	93
			TRH C29-C36	mg/kg	45	<45	<45	40	89
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	47	<25	40	107
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	47	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	85
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242401.002	LB270141.004	Monocyclic	Benzene	mg/kg	0.1	4.8	<0.1	5	97
		Aromatic	Toluene	mg/kg	0.1	4.9	<0.1	5	99
			Ethylbenzene	mg/kg	0.1	5.0	<0.1	5	100
			m/p-xylene	mg/kg	0.2	9.8	<0.2	10	98
			o-xylene	mg/kg	0.1	5.3	<0.1	5	106
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.6	7.4	10	76
			d8-toluene (Surrogate)	mg/kg	-	7.0	7.4	10	70
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	8.3	10	85
		Totals	Total BTEX*	mg/kg	0.6	30	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	15	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242401.002	LB270141.004		TRH C6-C10	mg/kg	25	90	<25	92.5	96
			TRH C6-C9	mg/kg	20	78	<20	80	96
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.6	7.4	10	76
			d8-toluene (Surrogate)	mg/kg	-	7.0	7.4	10	70
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	8.3	-	85
		VPH F	Benzene (F0)	mg/kg	0.1	4.8	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	60	<25	62.5	95

MATRIX SPIKE DUPLICATES

SE242420 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

SGS

FOOTNOTES

SE242420 R0

S

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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Chain of Custody Form – Ref 15156-1

Ref:	**15156-1**		**Sample matrix**			**Sample preservation**				**Analysis**								
Investigator:	Envirowest Consulting 9 Cameron Place PO Box 8158 ORANGE NSW 2800									**SGS Method Code**								
Telephone:	(02) 6361 4954																	
Email:	[redacted]																	
Contact Person:	Felipe Canavez																	
Invoice:	accounts@envirowest.net.au									**CL2T**	**OPP**	**OCP**	**pH**	**CEC**	**Clay content**	**CL10**		
Laboratory:	SGS SYDNEY 16/33 Maddox Street ALEXANDRIA NSW 2015		Water	Soil	Sludge	Cool	HNO3/HCl	Unpre-served		CL2T (8 metals)		OCP	pH	Cation exchange capacity	Clay content	TRH, PAH, BTEX, 8 Metals		
Quotation #:	Envir_70119_2019																	
Courier/CN:	Grants Express																	
	Sample ID	**Container***	**Sampling Date/Time**															
1	CR101	A	25/01/2023		X		X			X								
2	CR102	A	25/01/2023		X		X			X								
3	CR103	A	25/01/2023		X		X			X								
4	CR104	A	25/01/2023		X		X			X		X						
5	CR105	A	25/01/2023		X		X			X								
6	CR106	A	25/01/2023		X		X			X								
7	CR107	A	25/01/2023		X		X			X								
8	CR108	A	25/01/2023		X		X			X		X						
9	CR109	A	25/01/2023		X		X			X			X	X	X			
10	CR110	A	25/01/2023		X		X			X								
11	CR111	A	25/01/2023		X		X			X								
12	CR112	A	25/01/2023		X		X			X		X						
13	CR113	A	25/01/2023		X		X			X								
14	CR114	A	25/01/2023		X		X			X								
15	CR115	A	25/01/2023		X		X			X								
16	CR116	A	25/01/2023		X		X			X		X						
17	CR117	A	25/01/2023		X		X			X								
18	CR118	A	25/01/2023		X		X			X								
19	CR119	A	25/01/2023		X		X			X								
20	CR120	A	25/01/2023		X		X			X		X						

SGS EHS Sydney COC

SE242420

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 25/01/2023 Time: 10.30

Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time
Virginia Brago [redacted]	Date: 30/01/2023	Time 1500	[redacted]	31/1/23	@ 10.50

Please return completed form to Envirowest Consulting, *A = Solvent rinsed glass jar with Teflon lined lid and green label, B = Plastic with green label, C= Amber with green label, D= Vial with white label, E= Plastic with red label

Chain of Custody Form – Ref 15156-1

Sheet 1 of 2

Ref: 15156-1
Investigator: Envirowest Consulting
9 Cameron Place
PO Box 8158
ORANGE NSW 2800
Telephone: (02) 6361 4954

Email: [redacted]
Contact Person: Felipe Canavez
Invoice: accounts@envirowest.net.au

Laboratory: SGS SYDNEY
16/33 Maddox Street
ALEXANDRIA NSW 2015

Quotation #: Envir_70119_2019
Courier/CN: Grants Express

	Sample ID	Container*	Sampling Date/Time	Sample matrix: Water	Sample matrix: Soil	Sample matrix: Sludge	Sample preservation: Cool	Sample preservation: HNO3/HCl	Sample preservation: Unpreserved	Analysis: CL2T (8 metals)	Analysis: OPP (Organic phosphorus pesticide)	Analysis: OCP (OCP)	Analysis: pH (pH)	Analysis: CEC (Cation exchange capacity)	Analysis: Clay content (Clay content)	Analysis: CL10 (TRH, PAH, BTEX, 8 Metals)
										SGS Method Code						
21	CR121	A	25/01/2023		X		X			X						
22	CR122	A	25/01/2023		X		X			X						
23	DA1	A	25/01/2023		X		X			X						
24	DA2	A	25/01/2023		X		X			X						
25	DA3	A	25/01/2023		X		X			X						
26	DA4	A	25/01/2023		X		X			X						
27	DA5	A	25/01/2023		X		X			X						
28	DA6	A	25/01/2023		X		X			X						
29	DA7	A	25/01/2023		X		X			X						
30	HS1	A	25/01/2023		X		X									X
31	HS2	A	25/01/2023		X		X									X
32	HS3	A	25/01/2023		X		X									X
33	xHS4	A	25/01/2023		X		X									X
34	HS5	A	25/01/2023		X		X									X
35	SL1	A	25/01/2023		X		X				X	X				
36	SL2	A	25/01/2023		X		X				X	X				

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 25/01/2023 Time: 10.30

Relinquished by: (print and signature) Virginia Brady [redacted] Date: 30/01/2023 Time 1500

Received by: (print and signature) [redacted] Date 31/1/23 Time @ 10.50

Please return completed form to Envirowest Consulting, *A = Solvent rinsed glass jar with Teflon lined lid and green label, B= Plastic with green label, C= Amber with green label, D= Vial with white label, E= Plastic with red labe

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Admin	Manager	Anthony Nilsson
Client	SGS I&E SYDNEY	Laboratory	SGS Cairns Environmental
Address	5058 201 I&E HSE SYDNEY (EX 5258) UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015	Address	Unit 2, 58 Comport St Portsmith QLD 4870
Telephone	[redacted]	Telephone	[redacted]
Facsimile		Facsimile	
Email		Email	
Project	**15156-1**	SGS Reference	**CE164440 R0**
Order Number	**SE242420**	Date Received	02 Feb 2023
Samples	1	Date Reported	07 Feb 2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146/19038)

SIGNATORIES

[redacted]

Anthony NILSSON
Operations Manager

SGS

ANALYTICAL REPORT CE164440 R0

Parameter	Units	LOR	Sample Number: CE164440.009 Sample Matrix: Soil Sample Date: 25/1/23 10:30 Sample Name: SE242420.009
Moisture Content Method: AN002 Tested: 6/2/2023			
% Moisture	%w/w	1	17
Particle sizing of soils by sieving Method: AN005 Tested: 7/2/2023			
Passing 75µm	%w/w	1	95
Retained 75µm	%w/w	1	5
Particle sizing of soils <75µm by hydrometer Method: AN005 Tested: 7/2/2023			
Clay (<0.002mm)	%w/w	0.1	4.0

SGS

QC SUMMARY

CE164440 R0

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

No QC samples were reported for this job.

SGS

METHOD SUMMARY

CE164440 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.

SGS

FOOTNOTES

CE164440 R0

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420A R0**
Date Received	1/2/2023
Date Reported	8/2/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

[redacted]
Akheeqar BENIAMEEN
Chemist

[redacted]
Shane MCDERMOTT
Inorganic/Metals Chemist

[redacted]
Teresa NGUYEN
Organic Chemist

SGS

ANALYTICAL RESULTS SE242420A R0

OC Pesticides in Soil [AN420] Tested: 3/2/2023

PARAMETER	UOM	LOR	HS1 SOIL - 25/1/23 10:30 SE242420A.030	HS2 SOIL - 25/1/23 10:30 SE242420A.031	HS3 SOIL - 25/1/23 10:30 SE242420A.032	HS4 SOIL - 25/1/23 10:30 SE242420A.033	HS5 SOIL - 25/1/23 10:30 SE242420A.034
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE242420A R0

OP Pesticides in Soil [AN420] Tested: 3/2/2023

PARAMETER	UOM	LOR	HS1 SOIL - 25/1/23 10:30 SE242420A.030	HS2 SOIL - 25/1/23 10:30 SE242420A.031	HS3 SOIL - 25/1/23 10:30 SE242420A.032	HS4 SOIL - 25/1/23 10:30 SE242420A.033	HS5 SOIL - 25/1/23 10:30 SE242420A.034
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

SGS

METHOD SUMMARY

SE242420A R0

METHOD	METHODOLOGY SUMMARY
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242420A R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420A R0**
Date Received	01 Feb 2023
Date Reported	08 Feb 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	5 Soil	Type of documentation received	Email
Date documentation received	1/2/2023@8:45am	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	21.7°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS

HOLDING TIME SUMMARY

SE242420A R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS1	SE242420A.030	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS2	SE242420A.031	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS3	SE242420A.032	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS4	SE242420A.033	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS5	SE242420A.034	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS1	SE242420A.030	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS2	SE242420A.031	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS3	SE242420A.032	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS4	SE242420A.033	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023
HS5	SE242420A.034	LB270494	25 Jan 2023	01 Feb 2023	08 Feb 2023	03 Feb 2023	15 Mar 2023	06 Feb 2023

SURROGATES

SE242420A R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	HS1	SE242420A.030	%	60 - 130%	105
	HS2	SE242420A.031	%	60 - 130%	106
	HS3	SE242420A.032	%	60 - 130%	95
	HS4	SE242420A.033	%	60 - 130%	96
	HS5	SE242420A.034	%	60 - 130%	97

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS1	SE242420A.030	%	60 - 130%	110
	HS2	SE242420A.031	%	60 - 130%	110
	HS3	SE242420A.032	%	60 - 130%	97
	HS4	SE242420A.033	%	60 - 130%	108
	HS5	SE242420A.034	%	60 - 130%	106
d14-p-terphenyl (Surrogate)	HS1	SE242420A.030	%	60 - 130%	109
	HS2	SE242420A.031	%	60 - 130%	122
	HS3	SE242420A.032	%	60 - 130%	86
	HS4	SE242420A.033	%	60 - 130%	106
	HS5	SE242420A.034	%	60 - 130%	104

SGS

METHOD BLANKS

SE242420A R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270494.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.1
		Endrin	mg/kg	0.2	<0.1
		Beta Endosulfan	mg/kg	0.2	<0.1
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	95

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270494.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	97
		d14-p-terphenyl (Surrogate)	%	-	99

SGS

DUPLICATES

SE242420A R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242508.001	LB270494.026		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.1	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.1	200	0
			Endrin	mg/kg	0.2	<0.2	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.1	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	0
SE242588.001	LB270494.024		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.1	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.1	200	0
			Endrin	mg/kg	0.2	<0.2	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.1	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.16	30	7

SGS

DUPLICATES

SE242420A R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242509.001	LB270494.026		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
SE242588.001	LB270494.024		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

LABORATORY CONTROL SAMPLES

SE242420A R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270494.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	84
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	84
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	86
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	88
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	93
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	77
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130	90

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270494.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	96
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	100
		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	78
		Ethion	mg/kg	0.2	2.0	2	60 - 140	100
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	101
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	103

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MATRIX SPIKES

SE242420A R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242420A.030	LB270494.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	95
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	93
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	95
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.1	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	97
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	102
			Beta Endosulfan	mg/kg	0.2	<0.1	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.1	<0.1	0.2	64
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.16	-	101

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242420A.030	LB270494.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.2	<0.2	2	110
			Diazinon (Dimpylate)	mg/kg	0.5	2.3	<0.5	2	113
			Dichlorvos	mg/kg	0.5	1.6	<0.5	2	81
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	2.4	<0.2	2	119
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	8.5	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.6	0.5	-	114
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.5	-	114

MATRIX SPIKE DUPLICATES

SE242420A R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

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FOOTNOTES

SE242420A R0

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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Hi GBS.

Please book this testing in as an A job.
Thanks.

Matthew Tyler
Environment, Health & Safety
Client Services

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015

From: Felipe Canavez [redacted]
Sent: Wednesday, 1 February 2023 8:45 AM
To: AU.SampleReceipt.Sydney, AU (Sydney)
Cc: AU.Environmental.Sydney, AU (Sydney) [redacted]
Subject: [EXTERNAL] RE: SGS Sample Receipt Advice (Ref: 15156-1, Lab Ref: SE242420)

[redacted]

Hi,

Good morning. Can I please have the samples HS1, HS2, HS3, HS4 and HS5 booked for the SVOC suite SV3 (OP and OC pesticides) please? Standard turnaround time.

Also, the sample HS4 has an x in front of it, can you please report it without the x? I could send an updated COC if necessary.

Thank you,

Felipe Canavez
Environmental Geologist

Envirowest Consulting Pty Ltd
9 Cameron Place
PO Box 8158
Orange NSW 2800
ph. 02 6361 4954
[redacted]
www.envirowest.net.au

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Please consider the environment before printing this email.

From [redacted]
Sent: Tuesday, 31 January 2023 9:33 PM
To: Felipe Canavez [redacted]; admin <[redacted]
Subject: SGS Sample Receipt Advice (Ref: 15156-1, Lab Ref: SE242420)

Dear Felipe Canavez,

Please be advised we have received samples for analysis as detailed in the attached documentation.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best regards,
SGS Alexandria Sample Administration Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400
Fax: +61 (0)2 8594 0499

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420B R0**
Date Received	8/2/2023
Date Reported	13/2/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

[redacted]
Dong LIANG
Metals/Inorganics Team Leader

[redacted]
Huong CRAWFORD
Production Manager

SGS

ANALYTICAL RESULTS

SE242420B R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 8/2/2023

PARAMETER	UOM	LOR	SL1 SOIL - 25/1/23 10:30 SE242420B.035	SL2 SOIL - 25/1/23 10:30 SE242420B.036
Arsenic, As	mg/kg	1	4	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	5.7
Copper, Cu	mg/kg	0.5	39	2.2
Lead, Pb	mg/kg	1	16	7
Nickel, Ni	mg/kg	0.5	4.6	0.8
Zinc, Zn	mg/kg	2	39	4

SGS

ANALYTICAL RESULTS

SE242420B R0

Mercury in Soil [AN312] Tested: 8/2/2023

PARAMETER	UOM	LOR	SL1 SOIL - 25/1/23 10:30 SE242420B.035	SL2 SOIL - 25/1/23 10:30 SE242420B.036
Mercury	mg/kg	0.05	<0.05	<0.05

METHOD SUMMARY

SE242420B R0

METHOD	METHODOLOGY SUMMARY
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242420B R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420B R0**
Date Received	08 Feb 2023
Date Reported	13 Feb 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Sample counts by matrix	2 Soil	Type of documentation received	Email
Date documentation received	8/2/2023@4:45pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	21.7C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS

HOLDING TIME SUMMARY

SE242420B R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SL1	SE242420B.035	LB270947	25 Jan 2023	08 Feb 2023	22 Feb 2023	08 Feb 2023	22 Feb 2023	09 Feb 2023
SL2	SE242420B.036	LB270947	25 Jan 2023	08 Feb 2023	22 Feb 2023	08 Feb 2023	22 Feb 2023	09 Feb 2023

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SL1	SE242420B.035	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
SL2	SE242420B.036	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023

SURROGATES

SE242420B R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

SGS

METHOD BLANKS

SE242420B R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB270947.001	Mercury	mg/kg	0.05	<0.05

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB270946.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

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DUPLICATES

SE242420B R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242860.001	LB270947.012	Mercury	mg/kg	0.05	<0.05	<0.05	166	0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242860.001	LB270946.021	Arsenic, As	mg/kg	1	5	5	50	4
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	9.9	11	35	8
		Copper, Cu	mg/kg	0.5	14	14	34	5
		Nickel, Ni	mg/kg	0.5	6.2	6.1	38	0
		Lead, Pb	mg/kg	1	20	19	35	3
		Zinc, Zn	mg/kg	2	46	45	34	1

LABORATORY CONTROL SAMPLES

SE242420B R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270947.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	107

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270946.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	107
	Cadmium, Cd	mg/kg	0.3	3.9	4.81	70 - 130	80
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100

MATRIX SPIKES

SE242420B R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241784A.030	LB270947.004	Mercury	mg/kg	0.05	0.23	<0.05	0.2	114

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241784A.030	LB270946.004	Arsenic, As	mg/kg	1	50	2	50	97
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	92
		Chromium, Cr	mg/kg	0.5	55	5.8	50	98
		Copper, Cu	mg/kg	0.5	110	100	50	7 ⓖ
		Nickel, Ni	mg/kg	0.5	64	15	50	98
		Lead, Pb	mg/kg	1	51	6	50	91
		Zinc, Zn	mg/kg	2	63	19	50	88

MATRIX SPIKE DUPLICATES

SE242420B R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

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FOOTNOTES

SE242420B R0

S

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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This test report shall not be reproduced, except in full.

Hi GBS team,

Please book this in, thanks.

Kind Regards,

Huong Crawford
Industries & Environment
Production Manager

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Phone:
Fax:
E-mail: [redacted]
Web:

View Your Results Online: engage.sgs.com

From: Felipe Canavez [redacted]
Sent: Wednesday, 8 February 2023 4:45 PM
To: AU.Environmental.Sydney, AU (Sydney) [redacted]
Subject: [EXTERNAL] RE: Report Job SE242420, your reference 15156-1, order number 15156-1

[redacted]

Hi,

Can I have the samples SL1 and SL2 analysed for the suite CL2T (8 metals) please? Standard turnaround time.

Thank you,

Felipe Canavez
Environmental Geologist

Envirowest Consulting Pty Ltd
9 Cameron Place
PO Box 8158
Orange NSW 2800
ph 02 6361 4954
[redacted]
www.envirowest.net.au

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Please consider the environment before printing this email.

From: [redacted]
Sent: Tuesday, 7 February 2023 6:00 PM
To: admin [redacted]
Subject: Report Job SE242420, your reference 15156-1, order number 15156-1

Dear Valued Customer,

Please find attached the report for SGS job SE242420, your reference 15156-1, order number 15156-1.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420RE R0**
Date Received	16/3/2023
Date Reported	22/3/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

[redacted]

Dong LIANG
Metals/Inorganics Team Leader

[redacted]

Shane MCDERMOTT
Inorganic/Metals Chemist

SGS

ANALYTICAL RESULTS SE242420RE R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 16/3/2023

PARAMETER	UOM	LOR	CR101 SOIL - 25/1/23 10:30 SE242420RE.001	DA1 SOIL - 25/1/23 10:30 SE242420RE.023	DA2 SOIL - 25/1/23 10:30 SE242420RE.024	DA3 SOIL - 25/1/23 10:30 SE242420RE.025	DA4 SOIL - 25/1/23 10:30 SE242420RE.026
Arsenic, As	mg/kg	1	1	3	67	2	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.7	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	7.3	12	13	6.9	13
Copper, Cu	mg/kg	0.5	3.1	15	130	19	40
Lead, Pb	mg/kg	1	7	19	250	10	8
Nickel, Ni	mg/kg	0.5	1.3	3.7	4.3	2.1	3.0
Zinc, Zn	mg/kg	2	11	74	41	26	13

PARAMETER	UOM	LOR	DA5 SOIL - 25/1/23 10:30 SE242420RE.027	DA6 SOIL - 25/1/23 10:30 SE242420RE.028
Arsenic, As	mg/kg	1	7	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	6.3
Copper, Cu	mg/kg	0.5	54	2.9
Lead, Pb	mg/kg	1	29	7
Nickel, Ni	mg/kg	0.5	4.6	1.2
Zinc, Zn	mg/kg	2	15	11

SGS

METHOD SUMMARY

SE242420RE R0

METHOD	METHODOLOGY SUMMARY
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242420RE R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-1**
Order Number	**15156-1**
Samples	36

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242420RE R0**
Date Received	16 Mar 2023
Date Reported	22 Mar 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Sample counts by matrix	7 Soil	Type of documentation received	Email
Date documentation received	16/3/2023@11:50an	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	21.7C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS

HOLDING TIME SUMMARY

SE242420RE R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
CR101	SE242420RE.001	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
DA1	SE242420RE.023	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
DA2	SE242420RE.024	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
DA3	SE242420RE.025	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
DA4	SE242420RE.026	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
DA5	SE242420RE.027	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023
DA6	SE242420RE.028	LB274159	25 Jan 2023	16 Mar 2023	24 Jul 2023	16 Mar 2023	24 Jul 2023	22 Mar 2023

SURROGATES

SE242420RE R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

SGS

METHOD BLANKS

SE242420RE R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB274159.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

SGS

DUPLICATES

SE242420RE R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242420RE.02	LB274159.014	Arsenic, As	mg/kg	1	1	1	98	0
6		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	13	15	34	13
		Copper, Cu	mg/kg	0.5	40	38	31	4
		Nickel, Ni	mg/kg	0.5	3.0	2.8	48	7
		Lead, Pb	mg/kg	1	8	7	43	1
		Zinc, Zn	mg/kg	2	13	13	45	2
SE242420RE.02	LB274159.017	Arsenic, As	mg/kg	1	<1	<1	144	0
8		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.3	6.4	38	1
		Copper, Cu	mg/kg	0.5	2.9	3.0	47	2
		Nickel, Ni	mg/kg	0.5	1.2	1.3	69	4
		Lead, Pb	mg/kg	1	7	7	44	2
		Zinc, Zn	mg/kg	2	11	12	48	4

LABORATORY CONTROL SAMPLES

SE242420RE R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB274159.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	5.2	4.81	70 - 130	109
	Chromium, Cr	mg/kg	0.5	44	38.31	80 - 120	116
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	90	89.9	80 - 120	100
	Zinc, Zn	mg/kg	2	280	273	80 - 120	102

MATRIX SPIKES

SE242420RE R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242417RE.0	LB274159.004	Arsenic, As	mg/kg	1	49	3	50	93
01		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	56	8.3	50	95
		Copper, Cu	mg/kg	0.5	59	13	50	93
		Nickel, Ni	mg/kg	0.5	50	3.0	50	95
		Lead, Pb	mg/kg	1	58	14	50	87
		Zinc, Zn	mg/kg	2	110	84	50	43 ⓪

MATRIX SPIKE DUPLICATES

SE242420RE R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

SGS

FOOTNOTES

SE242420RE R0

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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This test report shall not be reproduced, except in full.

Hi GBS team.

Another RE job for Envirowest.
Thanks.

Matthew Tyler
Environment, Health & Safety
Client Services

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015

From: Felipe Canavez [redacted]
Sent: Thursday, 16 March 2023 11:50 AM
To: AU.Environmental.Sydney, AU (Sydney) [redacted] admin [redacted]
Cc: AU.SampleReceipt.Sydney, AU (Sydney) [redacted]
Subject: [EXTERNAL] RE: Report Job SE242420B, your reference 15156-1, order number 15156-1

[redacted]

Hi,

Can I have the samples CR101, DA1, DA2, DA3, DA4, DA5 and DA6 reanalysed for the suite CL1T please?

Standard turnaround time.

Thank you,

Felipe Canavez
Environmental Geologist

Envirowest Consulting Pty Ltd
9 Cameron Place
PO Box 8158
Orange NSW 2800
ph. 02 6361 4954
[redacted]
www.envirowest.net.au

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Please consider the environment before printing this email.

From: [redacted]
Sent: Monday, February 13, 2023 5:25 PM
To: admin[redacted]; Felipe Canavez[redacted]
Subject: Report Job SE242420B, your reference 15156-1, order number 15156-1

Dear Felipe,

Please find attached the report for SGS job SE242420B, your reference 15156-1, order number 15156-1.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-2**
Order Number	**15156-2**
Samples	16

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242441 R0**
Date Received	1/2/2023
Date Reported	8/2/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

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Shane MCDERMOTT
Inorganic/Metals Chemist

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Teresa NGUYEN
Organic Chemist

SGS

ANALYTICAL RESULTS SE242441 R0

VOC's in Soil [AN433] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

SGS

ANALYTICAL RESULTS

SE242441 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

SGS

ANALYTICAL RESULTS

SE242441 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	94	<45	<45	<45	93
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	120	<90	<90	<90	120
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	2500	<45	220	220
TRH C29-C36	mg/kg	45	<45	2600	<45	82	<45
TRH C37-C40	mg/kg	100	<100	490	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	31
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	31
TRH >C16-C34 (F3)	mg/kg	90	<90	4500	<90	290	230
TRH >C34-C40 (F4)	mg/kg	120	<120	1100	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	5100	<110	310	220
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	5600	<210	290	260

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
TRH C10-C14	mg/kg	20	<20	<20	280	<20	<20
TRH C15-C28	mg/kg	45	<45	95	12000	230	270
TRH C29-C36	mg/kg	45	<45	95	15000	210	420
TRH C37-C40	mg/kg	100	<100	<100	3500	<100	280
TRH >C10-C16	mg/kg	25	<25	<25	400	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	400	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	170	23000	380	520
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	7300	<120	450
TRH C10-C36 Total	mg/kg	110	<110	190	27000	440	690
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	31000	380	970

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ANALYTICAL RESULTS SE242441 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

SGS

ANALYTICAL RESULTS

SE242441 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

SGS

ANALYTICAL RESULTS SE242441 R0

OC Pesticides in Soil [AN420] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	**0.6**	**0.3**	**0.7**	**0.2**	**0.2**
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	**0.8**	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	**0.4**	**0.1**	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	**4.0**	**0.8**	**0.7**	<0.1	**0.1**
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	**6**	**1**	**1**	<1	<1
Total OC VIC EPA	mg/kg	1	**5**	**1**	**1**	<1	<1

SGS

ANALYTICAL RESULTS

SE242441 R0

OC Pesticides in Soil [AN420] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	**0.3**	**0.1**	**0.5**	**0.3**
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	**0.5**	**0.3**	**0.9**	**0.2**
Beta Endosulfan	mg/kg	0.2	<0.2	**0.3**	**0.3**	**0.8**	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	**0.6**	**0.5**	**1.1**	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	**2.2**	**1.3**	**3.2**	**0.9**
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	**4**	**3**	**6**	**1**
Total OC VIC EPA	mg/kg	1	<1	**3**	**2**	**6**	**1**

SGS

ANALYTICAL RESULTS SE242441 R0

OC Pesticides in Soil [AN420] Tested: 2/2/2023 (continued)

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	0.2	0.2	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	0.4	1.5	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	0.1	0.5	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	1.4	7.7	<0.1	0.3	0.2
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	2	10	<1	<1	<1
Total OC VIC EPA	mg/kg	1	2	8	<1	<1	<1

SGS

ANALYTICAL RESULTS SE242441 R0

OP Pesticides in Soil [AN420] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

SGS

ANALYTICAL RESULTS SE242441 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
Arsenic, As	mg/kg	1	4	4	4	4	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.8	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	34	29	29	19	33
Copper, Cu	mg/kg	0.5	98	40	240	78	52
Lead, Pb	mg/kg	1	51	25	29	20	16
Nickel, Ni	mg/kg	0.5	5.6	5.3	4.8	5.1	5.8
Zinc, Zn	mg/kg	2	170	68	610	63	120

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
Arsenic, As	mg/kg	1	5	4	4	3	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	31	46	31	24	14
Copper, Cu	mg/kg	0.5	140	42	30	72	21
Lead, Pb	mg/kg	1	20	27	18	20	100
Nickel, Ni	mg/kg	0.5	4.5	7.3	19	4.5	3.6
Zinc, Zn	mg/kg	2	55	110	46	78	120

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
Arsenic, As	mg/kg	1	3	2	2	3	2
Cadmium, Cd	mg/kg	0.3	<0.3	0.5	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	33	11	11	24	20
Copper, Cu	mg/kg	0.5	28	20	68	40	27
Lead, Pb	mg/kg	1	22	110	9	76	16
Nickel, Ni	mg/kg	0.5	5.2	3.9	2.1	4.3	9.2
Zinc, Zn	mg/kg	2	83	210	77	120	100

PARAMETER	UOM	LOR	DA8 SOIL - 31/1/2023 SE242441.016
Arsenic, As	mg/kg	1	3
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.5	30
Copper, Cu	mg/kg	0.5	110
Lead, Pb	mg/kg	1	56
Nickel, Ni	mg/kg	0.5	5.8
Zinc, Zn	mg/kg	2	170

SGS

ANALYTICAL RESULTS SE242441 R0

Mercury in Soil [AN312] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.05

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
Mercury	mg/kg	0.05	<0.05	0.27	0.05	<0.05	<0.05

PARAMETER	UOM	LOR	DA8 SOIL - 31/1/2023 SE242441.016
Mercury	mg/kg	0.05	0.07

SGS

ANALYTICAL RESULTS

SE242441 R0

Moisture Content [AN002] Tested: 2/2/2023

PARAMETER	UOM	LOR	HS6(100) SOIL - 31/1/2023 SE242441.001	HS7(200) SOIL - 31/1/2023 SE242441.002	HS8(100) SOIL - 31/1/2023 SE242441.003	HS9(200) SOIL - 31/1/2023 SE242441.004	HS10 SOIL - 31/1/2023 SE242441.005
% Moisture	%w/w	1	12.5	13.2	17.8	15.6	22.1

PARAMETER	UOM	LOR	HS11 SOIL - 31/1/2023 SE242441.006	HS12 SOIL - 31/1/2023 SE242441.007	HS13 SOIL - 31/1/2023 SE242441.008	HS14 SOIL - 31/1/2023 SE242441.009	HS15 SOIL - 31/1/2023 SE242441.010
% Moisture	%w/w	1	23.3	11.9	13.8	12.3	13.4

PARAMETER	UOM	LOR	HS16 SOIL - 31/1/2023 SE242441.011	HS17 SOIL - 31/1/2023 SE242441.012	HS18 SOIL - 31/1/2023 SE242441.013	HS19 SOIL - 31/1/2023 SE242441.014	HS20 SOIL - 31/1/2023 SE242441.015
% Moisture	%w/w	1	8.4	7.8	14.8	5.4	4.1

PARAMETER	UOM	LOR	DA8 SOIL - 31/1/2023 SE242441.016
% Moisture	%w/w	1	13.0

SGS

METHOD SUMMARY

SE242441 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC /MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES SE242441 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242441 R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-2**
Order Number	**15156-2**
Samples	16

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242441 R0**
Date Received	01 Feb 2023
Date Reported	08 Feb 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	12 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	3 items
Matrix Spike	OC Pesticides in Soil	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
	TRH (Total Recoverable Hydrocarbons) in Soil	3 items
	VOC's in Soil	1 item
	Volatile Petroleum Hydrocarbons in Soil	1 item

SAMPLE SUMMARY

Sample counts by matrix	16 Soil	Type of documentation received	COC
Date documentation received	1/2/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	18.7°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE242441 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS10	SE242441.005	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS11	SE242441.006	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS12	SE242441.007	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS13	SE242441.008	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS14	SE242441.009	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS15	SE242441.010	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS16	SE242441.011	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS17	SE242441.012	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS18	SE242441.013	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS19	SE242441.014	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
HS20	SE242441.015	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023
DA8	SE242441.016	LB270379	31 Jan 2023	01 Feb 2023	28 Feb 2023	02 Feb 2023	28 Feb 2023	06 Feb 2023

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS10	SE242441.005	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS11	SE242441.006	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS12	SE242441.007	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS13	SE242441.008	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS14	SE242441.009	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS15	SE242441.010	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS16	SE242441.011	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS17	SE242441.012	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS18	SE242441.013	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS19	SE242441.014	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
HS20	SE242441.015	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023
DA8	SE242441.016	LB270386	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	07 Feb 2023	06 Feb 2023

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS10	SE242441.005	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS11	SE242441.006	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS12	SE242441.007	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS13	SE242441.008	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS14	SE242441.009	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS15	SE242441.010	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS16	SE242441.011	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS17	SE242441.012	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS18	SE242441.013	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS19	SE242441.014	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS20	SE242441.015	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS10	SE242441.005	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242441 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

OP Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS11	SE242441.006	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS12	SE242441.007	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS13	SE242441.008	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS14	SE242441.009	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS15	SE242441.010	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS16	SE242441.011	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS17	SE242441.012	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS18	SE242441.013	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS19	SE242441.014	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS20	SE242441.015	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS10	SE242441.005	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS11	SE242441.006	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS12	SE242441.007	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS13	SE242441.008	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS14	SE242441.009	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS15	SE242441.010	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS16	SE242441.011	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS17	SE242441.012	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS18	SE242441.013	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS19	SE242441.014	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS20	SE242441.015	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS10	SE242441.005	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS11	SE242441.006	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS12	SE242441.007	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS13	SE242441.008	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS14	SE242441.009	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS15	SE242441.010	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS16	SE242441.011	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS17	SE242441.012	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS18	SE242441.013	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS19	SE242441.014	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
HS20	SE242441.015	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023
DA8	SE242441.016	LB270376	31 Jan 2023	01 Feb 2023	30 Jul 2023	02 Feb 2023	30 Jul 2023	06 Feb 2023

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS10	SE242441.005	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS11	SE242441.006	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS12	SE242441.007	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS13	SE242441.008	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS14	SE242441.009	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS15	SE242441.010	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS16	SE242441.011	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023

SGS

HOLDING TIME SUMMARY

SE242441 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

TRH (Total Recoverable Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS17	SE242441.012	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS18	SE242441.013	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS19	SE242441.014	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023
HS20	SE242441.015	LB270357	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Mar 2023	06 Feb 2023

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS10	SE242441.005	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS11	SE242441.006	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS12	SE242441.007	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS13	SE242441.008	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS14	SE242441.009	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS15	SE242441.010	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS16	SE242441.011	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS17	SE242441.012	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS18	SE242441.013	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS19	SE242441.014	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS20	SE242441.015	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS6(100)	SE242441.001	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS7(200)	SE242441.002	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS8(100)	SE242441.003	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS9(200)	SE242441.004	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS10	SE242441.005	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS11	SE242441.006	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS12	SE242441.007	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS13	SE242441.008	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS14	SE242441.009	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS15	SE242441.010	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS16	SE242441.011	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS17	SE242441.012	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS18	SE242441.013	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS19	SE242441.014	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023
HS20	SE242441.015	LB270381	31 Jan 2023	01 Feb 2023	14 Feb 2023	02 Feb 2023	14 Feb 2023	06 Feb 2023

SGS

SURROGATES

SE242441 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	97
	HS7(200)	SE242441.002	%	60 - 130%	104
	HS8(100)	SE242441.003	%	60 - 130%	101
	HS9(200)	SE242441.004	%	60 - 130%	103
	HS10	SE242441.005	%	60 - 130%	108
	HS11	SE242441.006	%	60 - 130%	105
	HS12	SE242441.007	%	60 - 130%	110
	HS13	SE242441.008	%	60 - 130%	103
	HS14	SE242441.009	%	60 - 130%	104
	HS15	SE242441.010	%	60 - 130%	102
	HS16	SE242441.011	%	60 - 130%	104
	HS17	SE242441.012	%	60 - 130%	97
	HS18	SE242441.013	%	60 - 130%	101
	HS19	SE242441.014	%	60 - 130%	97
	HS20	SE242441.015	%	60 - 130%	104

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	84
	HS7(200)	SE242441.002	%	60 - 130%	82
	HS8(100)	SE242441.003	%	60 - 130%	80
	HS9(200)	SE242441.004	%	60 - 130%	80
	HS10	SE242441.005	%	60 - 130%	84
	HS11	SE242441.006	%	60 - 130%	85
	HS12	SE242441.007	%	60 - 130%	82
	HS13	SE242441.008	%	60 - 130%	81
	HS14	SE242441.009	%	60 - 130%	82
	HS15	SE242441.010	%	60 - 130%	81
	HS16	SE242441.011	%	60 - 130%	80
	HS17	SE242441.012	%	60 - 130%	83
	HS18	SE242441.013	%	60 - 130%	86
	HS19	SE242441.014	%	60 - 130%	82
	HS20	SE242441.015	%	60 - 130%	83
d14-p-terphenyl (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	87
	HS7(200)	SE242441.002	%	60 - 130%	85
	HS8(100)	SE242441.003	%	60 - 130%	85
	HS9(200)	SE242441.004	%	60 - 130%	85
	HS10	SE242441.005	%	60 - 130%	85
	HS11	SE242441.006	%	60 - 130%	89
	HS12	SE242441.007	%	60 - 130%	90
	HS13	SE242441.008	%	60 - 130%	86
	HS14	SE242441.009	%	60 - 130%	87
	HS15	SE242441.010	%	60 - 130%	86
	HS16	SE242441.011	%	60 - 130%	85
	HS17	SE242441.012	%	60 - 130%	86
	HS18	SE242441.013	%	60 - 130%	103
	HS19	SE242441.014	%	60 - 130%	86
	HS20	SE242441.015	%	60 - 130%	88

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS6(100)	SE242441.001	%	70 - 130%	84
	HS7(200)	SE242441.002	%	70 - 130%	82
	HS8(100)	SE242441.003	%	70 - 130%	80
	HS9(200)	SE242441.004	%	70 - 130%	80
	HS10	SE242441.005	%	70 - 130%	84
	HS11	SE242441.006	%	70 - 130%	85
	HS12	SE242441.007	%	70 - 130%	82
	HS13	SE242441.008	%	70 - 130%	81
	HS14	SE242441.009	%	70 - 130%	82
	HS15	SE242441.010	%	70 - 130%	81
	HS16	SE242441.011	%	70 - 130%	80

SGS

SURROGATES

SE242441 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS17	SE242441.012	%	70 - 130%	83
	HS18	SE242441.013	%	70 - 130%	86
	HS19	SE242441.014	%	70 - 130%	82
	HS20	SE242441.015	%	70 - 130%	83
d14-p-terphenyl (Surrogate)	HS6(100)	SE242441.001	%	70 - 130%	87
	HS7(200)	SE242441.002	%	70 - 130%	85
	HS8(100)	SE242441.003	%	70 - 130%	85
	HS9(200)	SE242441.004	%	70 - 130%	85
	HS10	SE242441.005	%	70 - 130%	85
	HS11	SE242441.006	%	70 - 130%	89
	HS12	SE242441.007	%	70 - 130%	90
	HS13	SE242441.008	%	70 - 130%	86
	HS14	SE242441.009	%	70 - 130%	87
	HS15	SE242441.010	%	70 - 130%	86
	HS16	SE242441.011	%	70 - 130%	85
	HS17	SE242441.012	%	70 - 130%	86
	HS18	SE242441.013	%	70 - 130%	103
	HS19	SE242441.014	%	70 - 130%	86
	HS20	SE242441.015	%	70 - 130%	88
d5-nitrobenzene (Surrogate)	HS6(100)	SE242441.001	%	70 - 130%	97
	HS7(200)	SE242441.002	%	70 - 130%	98
	HS8(100)	SE242441.003	%	70 - 130%	96
	HS9(200)	SE242441.004	%	70 - 130%	96
	HS10	SE242441.005	%	70 - 130%	96
	HS11	SE242441.006	%	70 - 130%	101
	HS12	SE242441.007	%	70 - 130%	98
	HS13	SE242441.008	%	70 - 130%	99
	HS14	SE242441.009	%	70 - 130%	100
	HS15	SE242441.010	%	70 - 130%	99
	HS16	SE242441.011	%	70 - 130%	97
	HS17	SE242441.012	%	70 - 130%	98
	HS18	SE242441.013	%	70 - 130%	119
	HS19	SE242441.014	%	70 - 130%	102
	HS20	SE242441.015	%	70 - 130%	103

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	75
	HS7(200)	SE242441.002	%	60 - 130%	71
	HS8(100)	SE242441.003	%	60 - 130%	69
	HS9(200)	SE242441.004	%	60 - 130%	71
	HS10	SE242441.005	%	60 - 130%	71
	HS11	SE242441.006	%	60 - 130%	70
	HS12	SE242441.007	%	60 - 130%	72
	HS13	SE242441.008	%	60 - 130%	73
	HS14	SE242441.009	%	60 - 130%	73
	HS15	SE242441.010	%	60 - 130%	69
	HS16	SE242441.011	%	60 - 130%	78
	HS17	SE242441.012	%	60 - 130%	76
	HS18	SE242441.013	%	60 - 130%	77
	HS19	SE242441.014	%	60 - 130%	88
	HS20	SE242441.015	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	74
	HS7(200)	SE242441.002	%	60 - 130%	70
	HS8(100)	SE242441.003	%	60 - 130%	71
	HS9(200)	SE242441.004	%	60 - 130%	73
	HS10	SE242441.005	%	60 - 130%	73
	HS11	SE242441.006	%	60 - 130%	73
	HS12	SE242441.007	%	60 - 130%	74
	HS13	SE242441.008	%	60 - 130%	74
	HS14	SE242441.009	%	60 - 130%	75

SGS

SURROGATES

SE242441 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	HS15	SE242441.010	%	60 - 130%	71
	HS16	SE242441.011	%	60 - 130%	75
	HS17	SE242441.012	%	60 - 130%	73
	HS18	SE242441.013	%	60 - 130%	67
	HS19	SE242441.014	%	60 - 130%	71
	HS20	SE242441.015	%	60 - 130%	71
d8-toluene (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	81
	HS7(200)	SE242441.002	%	60 - 130%	77
	HS8(100)	SE242441.003	%	60 - 130%	75
	HS9(200)	SE242441.004	%	60 - 130%	77
	HS10	SE242441.005	%	60 - 130%	77
	HS11	SE242441.006	%	60 - 130%	77
	HS12	SE242441.007	%	60 - 130%	80
	HS13	SE242441.008	%	60 - 130%	78
	HS14	SE242441.009	%	60 - 130%	80
	HS15	SE242441.010	%	60 - 130%	76
	HS16	SE242441.011	%	60 - 130%	84
	HS17	SE242441.012	%	60 - 130%	82
	HS18	SE242441.013	%	60 - 130%	75
	HS19	SE242441.014	%	60 - 130%	87
	HS20	SE242441.015	%	60 - 130%	86

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	75
	HS7(200)	SE242441.002	%	60 - 130%	71
	HS8(100)	SE242441.003	%	60 - 130%	69
	HS9(200)	SE242441.004	%	60 - 130%	71
	HS10	SE242441.005	%	60 - 130%	71
	HS11	SE242441.006	%	60 - 130%	70
	HS12	SE242441.007	%	60 - 130%	72
	HS13	SE242441.008	%	60 - 130%	73
	HS14	SE242441.009	%	60 - 130%	73
	HS15	SE242441.010	%	60 - 130%	69
	HS16	SE242441.011	%	60 - 130%	78
	HS17	SE242441.012	%	60 - 130%	76
	HS18	SE242441.013	%	60 - 130%	77
	HS19	SE242441.014	%	60 - 130%	88
	HS20	SE242441.015	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	74
	HS7(200)	SE242441.002	%	60 - 130%	70
	HS8(100)	SE242441.003	%	60 - 130%	71
	HS9(200)	SE242441.004	%	60 - 130%	73
	HS10	SE242441.005	%	60 - 130%	73
	HS11	SE242441.006	%	60 - 130%	73
	HS12	SE242441.007	%	60 - 130%	74
	HS13	SE242441.008	%	60 - 130%	74
	HS14	SE242441.009	%	60 - 130%	75
	HS15	SE242441.010	%	60 - 130%	71
	HS16	SE242441.011	%	60 - 130%	75
	HS17	SE242441.012	%	60 - 130%	73
	HS18	SE242441.013	%	60 - 130%	67
	HS19	SE242441.014	%	60 - 130%	71
	HS20	SE242441.015	%	60 - 130%	71
d8-toluene (Surrogate)	HS6(100)	SE242441.001	%	60 - 130%	81
	HS7(200)	SE242441.002	%	60 - 130%	77
	HS8(100)	SE242441.003	%	60 - 130%	75
	HS9(200)	SE242441.004	%	60 - 130%	77
	HS10	SE242441.005	%	60 - 130%	77
	HS11	SE242441.006	%	60 - 130%	77
	HS12	SE242441.007	%	60 - 130%	80

SGS

SURROGATES

SE242441 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	HS13	SE242441.008	%	60 - 130%	78
	HS14	SE242441.009	%	60 - 130%	80
	HS15	SE242441.010	%	60 - 130%	76
	HS16	SE242441.011	%	60 - 130%	84
	HS17	SE242441.012	%	60 - 130%	82
	HS18	SE242441.013	%	60 - 130%	75
	HS19	SE242441.014	%	60 - 130%	87
	HS20	SE242441.015	%	60 - 130%	86

SGS

METHOD BLANKS

SE242441 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB270379.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270357.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	107

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270357.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	74
		d14-p-terphenyl (Surrogate)	%	-	78

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB270357.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

SGS

METHOD BLANKS

SE242441 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270357.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	88
		2-fluorobiphenyl (Surrogate)	%	-	74
		d14-p-terphenyl (Surrogate)	%	-	78

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result
LB270376.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result
LB270357.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB270381.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	76
		d8-toluene (Surrogate)	%	-	78
		Bromofluorobenzene (Surrogate)	%	-	72
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB270381.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	76

SGS

DUPLICATES

SE242441 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270379.014	Mercury	mg/kg	0.05	0.05	0.08	104	52
SE242496.003	LB270379.024	Mercury	mg/kg	0.05	0.09	0.11	80	25

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270386.011	% Moisture	%w/w	1	13.4	15.7	37	16
SE242496.003	LB270386.021	% Moisture	%w/w	1	4.5	3.3	56	30

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270357.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	0.3	0.3	66	5
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	153	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	0.2	0.2	88	21
			p,p'-DDT	mg/kg	0.1	0.9	1.0	41	18
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	1	2	101	14
			Total OC VIC EPA	mg/kg	1	1	1	111	13
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	NVL	NVL	NVL	NVL
SE242496.003	LB270357.023		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0

SGS

DUPLICATES

SE242441 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242496.003	LB270357.023		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	1

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270357.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
SE242496.003	LB270357.023		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	4

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270357.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0

SGS

DUPLICATES

SE242441 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270357.014		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
SE242496.003	LB270357.023		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	0.1	0.1	111	26
			Acenaphthene	mg/kg	0.1	<0.1	0.1	151	28
			Fluorene	mg/kg	0.1	<0.1	0.2	107	68
			Phenanthrene	mg/kg	0.1	0.6	1.9	38	99 ⓑ
			Anthracene	mg/kg	0.1	0.2	0.6	55	92 ⓑ
			Fluoranthene	mg/kg	0.1	1.1	2.3	36	68 ⓑ
			Pyrene	mg/kg	0.1	1.1	2.3	36	66 ⓑ
			Benzo(a)anthracene	mg/kg	0.1	0.6	1.1	41	56 ⓑ
			Chrysene	mg/kg	0.1	0.6	1.0	43	53 ⓑ
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.8	1.3	40	44 ⓑ
			Benzo(k)fluoranthene	mg/kg	0.1	0.3	0.5	56	43
			Benzo(a)pyrene	mg/kg	0.1	0.8	1.3	40	45 ⓑ
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.5	0.7	46	40
			Dibenzo(ah)anthracene	mg/kg	0.1	0.1	0.2	103	38
			Benzo(ghi)perylene	mg/kg	0.1	0.5	0.7	46	40
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	1.1	1.8	24	45 ⓑ
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	1.1	1.8	24	45 ⓑ
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	1.1	1.8	30	45 ⓑ
			Total PAH (18)	mg/kg	0.8	7.4	14	31	63 ⓑ
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	4

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270376.014	Arsenic, As	mg/kg	1	2	3	72	27
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	168	0
		Chromium, Cr	mg/kg	0.5	14	14	34	4
		Copper, Cu	mg/kg	0.5	21	22	32	5
		Nickel, Ni	mg/kg	0.5	3.6	4.0	43	10
		Lead, Pb	mg/kg	1	100	150	31	33 ②
		Zinc, Zn	mg/kg	2	120	120	32	1
SE242496.003	LB270376.024	Arsenic, As	mg/kg	1	2	2	78	12
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	4.2	4.9	41	15
		Copper, Cu	mg/kg	0.5	14	24	33	51 ②
		Nickel, Ni	mg/kg	0.5	2.5	3.1	48	20
		Lead, Pb	mg/kg	1	75	68	31	10
		Zinc, Zn	mg/kg	2	54	77	33	36 ②

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270357.014		TRH C10-C14	mg/kg	20	<20	<20	173	0
			TRH C15-C28	mg/kg	45	220	260	49	19
			TRH C29-C36	mg/kg	45	<45	62	115	31
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	220	320	71	40
			TRH >C10-C40 Total (F bands)	mg/kg	210	260	320	101	20
		TRH F Bands	TRH >C10-C16	mg/kg	25	31	30	113	3
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	31	30	113	3
			TRH >C16-C34 (F3)	mg/kg	90	230	290	64	23

SGS

DUPLICATES

SE242441 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270357.014	TRH F Bands	TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE242496.003	LB270357.023		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	76	96	82	24
			TRH C29-C36	mg/kg	45	72	110	80	39
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	150	200	93	32
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	175	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	120	170	92	30
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	195	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270381.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.1	6.6	50	7
			d8-toluene (Surrogate)	mg/kg	-	7.6	7.1	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.9	7.1	50	3
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE242496.003	LB270381.023	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.3	6.9	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.2	7.6	50	9
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.8	7.1	50	8
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242441.010	LB270381.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.1	6.6	30	7
			d8-toluene (Surrogate)	mg/kg	-	7.6	7.1	30	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.9	7.1	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE242496.003	LB270381.023		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.3	6.9	30	6
			d8-toluene (Surrogate)	mg/kg	-	8.2	7.6	30	9
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.8	7.1	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

SGS

LABORATORY CONTROL SAMPLES

SE242441 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270379.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	113

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270357.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	88
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	94
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	91
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	92
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	89
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	83
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	96

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270357.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	2	60 - 140	88
		Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	90
		Dichlorvos	mg/kg	0.5	1.5	2	60 - 140	73
		Ethion	mg/kg	0.2	1.6	2	60 - 140	82
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	83
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270357.002		Naphthalene	mg/kg	0.1	4.1	4	60 - 140	104
		Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	104
		Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	102
		Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	99
		Anthracene	mg/kg	0.1	4.0	4	60 - 140	101
		Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	109
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	107
		Benzo(a)pyrene	mg/kg	0.1	4.5	4	60 - 140	114
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	97
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	83
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270376.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	106
	Cadmium, Cd	mg/kg	0.3	4.3	4.81	70 - 130	90
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	100
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	97
	Lead, Pb	mg/kg	1	91	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270357.002		TRH C10-C14	mg/kg	20	46	40	60 - 140	115
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	111
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	76
	TRH F Bands	TRH >C10-C16	mg/kg	25	45	40	60 - 140	113
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	101
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	72

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270381.002	Monocyclic	Benzene	mg/kg	0.1	5.0	5	60 - 140	100
	Aromatic	Toluene	mg/kg	0.1	5.0	5	60 - 140	100
		Ethylbenzene	mg/kg	0.1	5.1	5	60 - 140	103
		m/p-xylene	mg/kg	0.2	9.8	10	60 - 140	98
		o-xylene	mg/kg	0.1	4.9	5	60 - 140	98
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	10	70 - 130	77

LABORATORY CONTROL SAMPLES

SE242441 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270381.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	8.6	10	70 - 130	86
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270381.002		TRH C6-C10	mg/kg	25	98	92.5	60 - 140	105
		TRH C6-C9	mg/kg	20	87	80	60 - 140	109
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	10	70 - 130	77
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	68	62.5	60 - 140	108

SGS

MATRIX SPIKES

SE242441 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270379.004	Mercury	mg/kg	0.05	0.27	<0.05	0.2	111

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270357.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	95
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	99
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	97
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	0.3	0.6	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	97
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	94
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	0.1	0.4	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	0.5	0.8	-	-
			p,p'-DDT	mg/kg	0.1	3.1	4.0	0.2	-468 ⑥
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	5	6	-	-
			Total OC VIC EPA	mg/kg	1	5	5	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	NVL	NVL	NVL	NVL

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270357.004		Azinphos-methyl (Guthion)	mg/kg	0.2	2.0	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	<0.2	2	91
			Diazinon (Dimpylate)	mg/kg	0.5	1.8	<0.5	2	90
			Dichlorvos	mg/kg	0.5	1.5	<0.5	2	74
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.9	<0.2	2	96
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	9.0	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	84
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270357.004	Naphthalene	mg/kg	0.1	4.1	<0.1	4	102
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.2	<0.1	4	105
		Acenaphthene	mg/kg	0.1	4.0	<0.1	4	101
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-

MATRIX SPIKES

SE242441 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270357.004		Phenanthrene	mg/kg	0.1	3.9	<0.1	4	98
			Anthracene	mg/kg	0.1	3.9	<0.1	4	99
			Fluoranthene	mg/kg	0.1	4.4	<0.1	4	109
			Pyrene	mg/kg	0.1	4.1	<0.1	4	102
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.5	<0.1	4	113
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.5	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.6	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.7	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	33	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	97
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	84
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	87

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270376.004	Arsenic, As	mg/kg	1	48	4	50	87
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	83	34	50	98
		Copper, Cu	mg/kg	0.5	130	98	50	59 ⓖ
		Nickel, Ni	mg/kg	0.5	51	5.6	50	91
		Lead, Pb	mg/kg	1	89	51	50	76
		Zinc, Zn	mg/kg	2	170	170	50	8 ⓖ

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270357.004		TRH C10-C14	mg/kg	20	53	<20	40	113
			TRH C15-C28	mg/kg	45	100	94	40	15 ⓖ
			TRH C29-C36	mg/kg	45	54	<45	40	48 ⓖ
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	210	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	53	<25	40	110
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	53	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	110	120	40	-27 ⓖ
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270381.004	Monocyclic	Benzene	mg/kg	0.1	4.5	<0.1	5	90
		Aromatic	Toluene	mg/kg	0.1	4.7	<0.1	5	93
			Ethylbenzene	mg/kg	0.1	4.8	<0.1	5	96
			m/p-xylene	mg/kg	0.2	9.3	<0.2	10	93
			o-xylene	mg/kg	0.1	4.7	<0.1	5	93
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.8	7.4	10	68 ①
			d8-toluene (Surrogate)	mg/kg	-	7.6	8.1	10	76
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	7.5	10	89
		Totals	Total BTEX*	mg/kg	0.6	28	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	14	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270381.004		TRH C6-C10	mg/kg	25	93	<25	92.5	100
			TRH C6-C9	mg/kg	20	82	<20	80	102
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.8	7.4	10	68 ①
			d8-toluene (Surrogate)	mg/kg	-	7.6	8.1	10	76

MATRIX SPIKES

SE242441 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242441.001	LB270381.004	Surrogates	Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	7.5	-	89
		VPH F	Benzene (F0)	mg/kg	0.1	4.5	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	65	<25	62.5	103

MATRIX SPIKE DUPLICATES

SE242441 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

SGS

FOOTNOTES

SE242441 R0

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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source: Sydney.pdf page: 7 SGS Ref: SE242441_COC

Chain of Custody Form – Ref 15156-2

Sheet 1 of 1

Ref: 15156-2
Investigator: Envirowest Consulting
9 Cameron Place
PO Box 8158
ORANGE NSW 2800
Telephone: (02) 6361 4954

Email: [redacted]
Contact Person: Felipe Canavez
Invoice: accounts@envirowest.net.au

Laboratory: SGS SYDNEY
16/33 Maddox Street
ALEXANDRIA NSW 2015

Quotation #: Envir_70119_2019
Courier/CN: Grants Express

	Sample ID	Container*	Sampling Date/Time	Sample matrix: Water	Soil	Sludge	Sample preservation: Cool	HNO3/HCl	Unpre-served	Analysis: SGS Method Code CL2T: CL2T (8 metals)	SV3: OC/OP pesticides	CL10: TRH, PAH, BTEX, 8 Metals			
1	HS6(100)	A	31/01/2023		X		X		X		X	X			
2	HS7(200)	A	31/01/2023		X		X		X		X	X			
3	HS8(100)	A	31/01/2023		X		X		X		X	X			
4	HS9(200)	A	31/01/2023		X		X		X		X	X			
5	HS10	A	31/01/2023		X		X		X		X	X			
6	HS11	A	31/01/2023		X		X		X		X	X			
7	HS12	A	31/01/2023		X		X		X		X	X			
8	HS13	A	31/01/2023		X		X		X		X	X			
9	HS14	A	31/01/2023		X		X		X		X	X			
10	HS15	A	31/01/2023		X		X		X		X	X			
11	HS16	A	31/01/2023		X		X		X		X	X			
12	HS17	A	31/01/2023		X		X		X		X	X			
13	HS18	A	31/01/2023		X		X		X		X	X			
14	HS19	A	31/01/2023		X		X		X		X	X			
15	HS20	A	31/01/2023		X		X		X		X	X			
16	DA8	A	31/01/2023		X		X		X	X					

SGS EHS Sydney COC
SE242441

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 31/01/2023 Time: 13.30

Relinquished by: (print and signature) Virginia Bragg [redacted] Date: 31/01/2023 Time 1500

Received by: (print and signature) [redacted] Date 01/02/23 Time @ 7.10

Please return completed form to Envirowest Consulting, *A = Solvent rinsed glass jar with Teflon lined lid and green label, B= Plastic with green label, C= Amber with green label, D= Vial with white label, E= Plastic with red label

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-3**
Order Number	**15156-3**
Samples	5

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242583 R0**
Date Received	3/2/2023
Date Reported	9/2/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

[redacted]
Akheeqar BENIAMEEN
Chemist

[redacted]
Bennet LO
Senior Chemist

[redacted]
Dong LIANG
Metals/Inorganics Team Leader

[redacted]
Huong CRAWFORD
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Shane MCDERMOTT
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Teresa NGUYEN
Organic Chemist

SGS

ANALYTICAL RESULTS

SE242583 R0

VOC's in Soil [AN433] Tested: 6/2/2023

PARAMETER	UOM	LOR	BH1(2000) SOIL - 2/2/2023 SE242583.001	BH2(2000) SOIL - 2/2/2023 SE242583.002	BH3(2000) SOIL - 2/2/2023 SE242583.003	HS21 SOIL - 2/2/2023 SE242583.004	DA9 SOIL - 2/2/2023 SE242583.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

SGS

ANALYTICAL RESULTS

SE242583 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 6/2/2023

PARAMETER	UOM	LOR	BH1(2000) SOIL - 2/2/2023 SE242583.001	BH2(2000) SOIL - 2/2/2023 SE242583.002	BH3(2000) SOIL - 2/2/2023 SE242583.003	HS21 SOIL - 2/2/2023 SE242583.004	DA9 SOIL - 2/2/2023 SE242583.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

SGS

ANALYTICAL RESULTS SE242583 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 6/2/2023

PARAMETER	UOM	LOR	BH1(2000) SOIL - 2/2/2023 SE242583.001	BH2(2000) SOIL - 2/2/2023 SE242583.002	BH3(2000) SOIL - 2/2/2023 SE242583.003	HS21 SOIL - 2/2/2023 SE242583.004	DA9 SOIL - 2/2/2023 SE242583.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	**1400**	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	**130**	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	**1500**	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	**1500**	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	**1500**	<210

SGS

ANALYTICAL RESULTS SE242583 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 6/2/2023

PARAMETER	UOM	LOR	HS21 SOIL - 2/2/2023 SE242583.004
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

SGS

ANALYTICAL RESULTS

SE242583 R0

OC Pesticides in Soil [AN420] Tested: 6/2/2023

PARAMETER	UOM	LOR	HS21 SOIL - 2/2/2023 SE242583.004
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	**0.4**
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	**0.4**
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

SGS

ANALYTICAL RESULTS

SE242583 R0

OP Pesticides in Soil [AN420] Tested: 6/2/2023

PARAMETER	UOM	LOR	HS21 SOIL - 2/2/2023 SE242583.004
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

SGS

ANALYTICAL RESULTS

SE242583 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 6/2/2023

PARAMETER	UOM	LOR	HS21 SOIL - 2/2/2023 SE242583.004
Arsenic, As	mg/kg	1	**5**
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.5	**36**
Copper, Cu	mg/kg	0.5	**30**
Lead, Pb	mg/kg	1	**55**
Nickel, Ni	mg/kg	0.5	**8.1**
Zinc, Zn	mg/kg	2	**370**

SGS

ANALYTICAL RESULTS

SE242583 R0

Mercury in Soil [AN312] Tested: 6/2/2023

PARAMETER	UOM	LOR	HS21 SOIL - 2/2/2023 SE242583.004
Mercury	mg/kg	0.05	0.05

SGS

ANALYTICAL RESULTS

SE242583 R0

Moisture Content [AN002] Tested: 6/2/2023

PARAMETER	UOM	LOR	BH1(2000) SOIL - 2/2/2023 SE242583.001	BH2(2000) SOIL - 2/2/2023 SE242583.002	BH3(2000) SOIL - 2/2/2023 SE242583.003	HS21 SOIL - 2/2/2023 SE242583.004	DA9 SOIL - 2/2/2023 SE242583.005
% Moisture	%w/w	1	15.7	19.6	20.7	19.2	18.0

SGS

METHOD SUMMARY

SE242583 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES SE242583 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE242583 R0

CLIENT DETAILS

Contact	Felipe Canavez
Client	ENVIROWEST CONSULTING PTY LIMITED
Address	PO BOX 8158 NSW 2800
Telephone	[redacted]
Facsimile	
Email	
Project	**15156-3**
Order Number	**15156-3**
Samples	5

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	[redacted]
Facsimile	
Email	
SGS Reference	**SE242583 R0**
Date Received	03 Feb 2023
Date Reported	09 Feb 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	TRH (Total Recoverable Hydrocarbons) in Soil	4 items

SAMPLE SUMMARY

Sample counts by matrix	5 Soil	Type of documentation received	COC
Date documentation received	3/2/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	22.7°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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HOLDING TIME SUMMARY

SE242583 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS21	SE242583.004	LB270704	02 Feb 2023	03 Feb 2023	02 Mar 2023	06 Feb 2023	02 Mar 2023	09 Feb 2023

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270695	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	11 Feb 2023	08 Feb 2023
BH2(2000)	SE242583.002	LB270695	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	11 Feb 2023	08 Feb 2023
BH3(2000)	SE242583.003	LB270695	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	11 Feb 2023	08 Feb 2023
HS21	SE242583.004	LB270695	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	11 Feb 2023	08 Feb 2023
DA9	SE242583.005	LB270695	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	11 Feb 2023	08 Feb 2023

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
BH2(2000)	SE242583.002	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
BH3(2000)	SE242583.003	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
HS21	SE242583.004	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	08 Feb 2023
DA9	SE242583.005	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
BH2(2000)	SE242583.002	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
BH3(2000)	SE242583.003	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
HS21	SE242583.004	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
DA9	SE242583.005	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
BH2(2000)	SE242583.002	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
BH3(2000)	SE242583.003	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
HS21	SE242583.004	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023
DA9	SE242583.005	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	09 Feb 2023

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HS21	SE242583.004	LB270698	02 Feb 2023	03 Feb 2023	01 Aug 2023	06 Feb 2023	01 Aug 2023	09 Feb 2023

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	08 Feb 2023
BH2(2000)	SE242583.002	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	08 Feb 2023
BH3(2000)	SE242583.003	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	08 Feb 2023
HS21	SE242583.004	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	08 Feb 2023
DA9	SE242583.005	LB270691	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	18 Mar 2023	08 Feb 2023

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
BH2(2000)	SE242583.002	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
BH3(2000)	SE242583.003	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
HS21	SE242583.004	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
DA9	SE242583.005	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1(2000)	SE242583.001	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
BH2(2000)	SE242583.002	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
BH3(2000)	SE242583.003	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
HS21	SE242583.004	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023
DA9	SE242583.005	LB270693	02 Feb 2023	03 Feb 2023	16 Feb 2023	06 Feb 2023	16 Feb 2023	08 Feb 2023

SGS

SURROGATES

SE242583 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	HS21	SE242583.004	%	60 - 130%	119

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS21	SE242583.004	%	60 - 130%	80
d14-p-terphenyl (Surrogate)	HS21	SE242583.004	%	60 - 130%	84

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	HS21	SE242583.004	%	70 - 130%	74
d14-p-terphenyl (Surrogate)	HS21	SE242583.004	%	70 - 130%	86
d5-nitrobenzene (Surrogate)	HS21	SE242583.004	%	70 - 130%	100

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1(2000)	SE242583.001	%	60 - 130%	92
	BH2(2000)	SE242583.002	%	60 - 130%	89
	BH3(2000)	SE242583.003	%	60 - 130%	85
	HS21	SE242583.004	%	60 - 130%	91
	DA9	SE242583.005	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	BH1(2000)	SE242583.001	%	60 - 130%	86
	BH2(2000)	SE242583.002	%	60 - 130%	86
	BH3(2000)	SE242583.003	%	60 - 130%	80
	HS21	SE242583.004	%	60 - 130%	84
	DA9	SE242583.005	%	60 - 130%	85
d8-toluene (Surrogate)	BH1(2000)	SE242583.001	%	60 - 130%	89
	BH2(2000)	SE242583.002	%	60 - 130%	88
	BH3(2000)	SE242583.003	%	60 - 130%	81
	HS21	SE242583.004	%	60 - 130%	87
	DA9	SE242583.005	%	60 - 130%	86

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1(2000)	SE242583.001	%	60 - 130%	92
	BH2(2000)	SE242583.002	%	60 - 130%	89
	BH3(2000)	SE242583.003	%	60 - 130%	85
	HS21	SE242583.004	%	60 - 130%	91
	DA9	SE242583.005	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	BH1(2000)	SE242583.001	%	60 - 130%	86
	BH2(2000)	SE242583.002	%	60 - 130%	86
	BH3(2000)	SE242583.003	%	60 - 130%	80
	HS21	SE242583.004	%	60 - 130%	84
	DA9	SE242583.005	%	60 - 130%	85
d8-toluene (Surrogate)	BH1(2000)	SE242583.001	%	60 - 130%	89
	BH2(2000)	SE242583.002	%	60 - 130%	88
	BH3(2000)	SE242583.003	%	60 - 130%	81
	HS21	SE242583.004	%	60 - 130%	87
	DA9	SE242583.005	%	60 - 130%	86

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METHOD BLANKS

SE242583 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB270704.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270691.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	114

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270691.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	76
		d14-p-terphenyl (Surrogate)	%	-	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB270691.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

SGS

METHOD BLANKS

SE242583 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB270691.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	77
		2-fluorobiphenyl (Surrogate)	%	-	76
		d14-p-terphenyl (Surrogate)	%	-	86

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result
LB270698.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result
LB270691.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB270693.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	86
		d8-toluene (Surrogate)	%	-	89
		Bromofluorobenzene (Surrogate)	%	-	91
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB270693.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	86

SGS

DUPLICATES

SE242583 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242716.002	LB270704.014	Mercury	mg/kg	0.05	0.0187777161	0.0148716	200	0
SE242716.004	LB270704.017	Mercury	mg/kg	0.05	0.0191792836	0.0145841584	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270695.011	% Moisture	%w/w	1	14.6008403361	15.8375634517	37	8
SE242716.004	LB270695.018	% Moisture	%w/w	1	18.5318892900	17.9566563467	35	3

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270691.014		Alpha BHC	mg/kg	0.1	0	0	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	0.0004527710	0.0004190863	200	0
			Beta BHC	mg/kg	0.1	0.0017467097	0.0009055929	200	0
			Lindane (gamma BHC)	mg/kg	0.1	0.0013317510	0.0016333795	200	0
			Delta BHC	mg/kg	0.1	0.0007725858	0.0030992710	200	0
			Heptachlor	mg/kg	0.1	0.0002797233	0.0004171465	200	0
			Aldrin	mg/kg	0.1	0.0011254617	0.0009542365	200	0
			Isodrin	mg/kg	0.1	0.0017466655	0.0014055795	200	0
			Heptachlor epoxide	mg/kg	0.1	0.0025903889	0.0022818405	200	0
			Gamma Chlordane	mg/kg	0.1	0.0022145894	0.0018937539	200	0
			Alpha Chlordane	mg/kg	0.1	0.0014698004	0.0012673048	200	0
			Alpha Endosulfan	mg/kg	0.2	0.0008788170	0.0007416988	200	0
			o,p'-DDE*	mg/kg	0.1	0.0008788170	0.0007416988	200	0
			p,p'-DDE	mg/kg	0.1	0.0008596524	0.0011676252	200	0
			Dieldrin	mg/kg	0.2	0.0098312957	0.0085619801	200	0
			Endrin	mg/kg	0.2	0.0035320414	0.0024912656	200	0
			Beta Endosulfan	mg/kg	0.2	0.0012141576	0.0010503333	200	0
			o,p'-DDD*	mg/kg	0.1	0.0016213540	0.0007397340	200	0
			p,p'-DDD	mg/kg	0.1	0.0009633318	0.0008363217	200	0
			Endrin aldehyde	mg/kg	0.1	0.0047255943	0.0044902022	200	0
			Endosulfan sulphate	mg/kg	0.1	0.0014829355	0.0017803849	200	0
			o,p'-DDT*	mg/kg	0.1	0.0009633318	0.0008363217	200	0
			p,p'-DDT	mg/kg	0.1	0.0006802857	0.0014273994	200	0
			Endrin ketone	mg/kg	0.1	0.0007986484	0.0026296165	200	0
			Methoxychlor	mg/kg	0.1	0.0006680948	0.0008192594	200	0
			Mirex	mg/kg	0.1	0.0017331974	0.0030707123	200	0
			trans-Nonachlor	mg/kg	0.1	0.0007143382	0.0006519192	200	0
			Total CLP OC Pesticides	mg/kg	1	0	0	200	0
			Total OC VIC EPA	mg/kg	1	0	0	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.1731063383	0.1743377919	30	1
SE242716.004	LB270691.021		Alpha BHC	mg/kg	0.1	0	0	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	0.0002987716	0.0004352070	200	0
			Beta BHC	mg/kg	0.1	0	0.0005713228	200	0
			Lindane (gamma BHC)	mg/kg	0.1	0	0	200	0
			Delta BHC	mg/kg	0.1	0.0065807972	0.0049124246	200	0
			Heptachlor	mg/kg	0.1	0.0005251082	0.0003640033	200	0
			Aldrin	mg/kg	0.1	0.0006338183	0.0006259900	200	0
			Isodrin	mg/kg	0.1	0.0016952027	0.0002180600	200	0
			Heptachlor epoxide	mg/kg	0.1	0.0019126494	0.0018443788	200	0
			Gamma Chlordane	mg/kg	0.1	0.0065078991	0.0063918438	200	0
			Alpha Chlordane	mg/kg	0.1	0.0012723246	0.0015434885	200	0
			Alpha Endosulfan	mg/kg	0.2	0.0006397051	0.0009979149	200	0
			o,p'-DDE*	mg/kg	0.1	0.0006397051	0.0009979149	200	0
			p,p'-DDE	mg/kg	0.1	0.0007667728	0.0009284688	200	0
			Dieldrin	mg/kg	0.2	0.0023622692	0.0009757686	200	0
			Endrin	mg/kg	0.2	0.0046766507	0.0045735051	200	0
			Beta Endosulfan	mg/kg	0.2	0.0006848525	0	200	0
			o,p'-DDD*	mg/kg	0.1	0	0	200	0
			p,p'-DDD	mg/kg	0.1	0.0005786873	0.0012802028	200	0

SGS

DUPLICATES

SE242583 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242716.004	LB270691.021		Endrin aldehyde	mg/kg	0.1	0.004369044	80.0042339474	200	0
			Endosulfan sulphate	mg/kg	0.1	0.002945372	70.0018112744	200	0
			o,p'-DDT*	mg/kg	0.1	0.0005786873	0	200	0
			p,p'-DDT	mg/kg	0.1	0.000448855	50.0018047038	200	0
			Endrin ketone	mg/kg	0.1	0.026860489	30.0067158001	200	0
			Methoxychlor	mg/kg	0.1	0.002213109	90.0014340876	200	0
			Mirex	mg/kg	0.1	0.033617254	40.0098103101	200	0
			trans-Nonachlor	mg/kg	0.1	0.005846871	20.0007340870	200	0
			Total CLP OC Pesticides	mg/kg	1	0	0	200	0
			Total OC VIC EPA	mg/kg	1	0	0	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.170803336	60.1750546304	30	2

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270691.014		Azinphos-methyl (Guthion)	mg/kg	0.2	0	0.0039897955	200	0
			Bromophos Ethyl	mg/kg	0.2	0	0	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	0.001630725	50.0038163678	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	0.001110517	60.0034096800	200	0
			Dichlorvos	mg/kg	0.5	0.001173124	90.0004517869	200	0
			Dimethoate	mg/kg	0.5	0.000564717	20.0009861798	200	0
			Ethion	mg/kg	0.2	0	0	200	0
			Fenitrothion	mg/kg	0.2	0	0.0002222796	200	0
			Malathion	mg/kg	0.2	0.002428250	60.0115259972	200	0
			Methidathion	mg/kg	0.5	0.0004194678	0	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	0	0	200	0
			Total OP Pesticides*	mg/kg	1.7	0	0	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.359414093	50.3616286264	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.409956140	90.4105375389	30	0
SE242716.004	LB270691.021		Azinphos-methyl (Guthion)	mg/kg	0.2	0.0005708625	0	200	0
			Bromophos Ethyl	mg/kg	0.2	0.000697354	80.0005017525	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	0.0004851244	0	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	0.0015340713	0	200	0
			Dichlorvos	mg/kg	0.5	0.002386740	70.0003344428	200	0
			Dimethoate	mg/kg	0.5	0.000233007	60.0004009290	200	0
			Ethion	mg/kg	0.2	0.0001861594	0	200	0
			Fenitrothion	mg/kg	0.2	0	0	200	0
			Malathion	mg/kg	0.2	0.011940720	20.0157523502	200	0
			Methidathion	mg/kg	0.5	0.0004972241	0	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	0	0	200	0
			Total OP Pesticides*	mg/kg	1.7	0	0	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.405381731	60.5079097512	30	22
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.427286763	10.5267456772	30	21

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270691.014	Naphthalene	mg/kg	0.1	0.008709014	20.0083454775	200	0
		2-methylnaphthalene	mg/kg	0.1	0.008561291	50.0079513309	200	0
		1-methylnaphthalene	mg/kg	0.1	0.007894849	40.0083734203	200	0
		Acenaphthylene	mg/kg	0.1	0.015439261	30.0177136217	200	0
		Acenaphthene	mg/kg	0.1	0.002428224	70.0042097606	200	0
		Fluorene	mg/kg	0.1	0.004119899	50.0069969248	200	0
		Phenanthrene	mg/kg	0.1	0.066190301	40.0951170178	154	0
		Anthracene	mg/kg	0.1	0.062110742	20.0295302021	200	0
		Fluoranthene	mg/kg	0.1	0.130198328	00.1739988930	96	29
		Pyrene	mg/kg	0.1	0.127737268	60.1585558032	100	22
		Benzo(a)anthracene	mg/kg	0.1	0.073379672	00.0913805869	151	0
		Chrysene	mg/kg	0.1	0.073357641	60.0873623194	154	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.106423775	80.1217204580	118	13
		Benzo(k)fluoranthene	mg/kg	0.1	0.043764860	20.0570749097	200	0
		Benzo(a)pyrene	mg/kg	0.1	0.089324062	50.1078460941	131	8
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.067431836	60.0795088503	166	0
		Dibenzo(ah)anthracene	mg/kg	0.1	0.012636203	70.0145326611	200	0

SGS

DUPLICATES

SE242583 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270691.014		Benzo(ghi)perylene	mg/kg	0.1	0.074995887	90.086738593	154	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	0	0.107846094	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.121	0.178846094	143	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	0.242	0.249846094	132	0
			Total PAH (18)	mg/kg	0.8	0.257935966	0.440400790	59	52
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.391617636	30.355877296	30	10
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.359414093	50.361628626	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.409956140	90.410537538	30	0
SE242716.004	LB270691.021		Naphthalene	mg/kg	0.1	0.000482540	90.000468149	200	0
			2-methylnaphthalene	mg/kg	0.1	0.000209149	20.000223411	200	0
			1-methylnaphthalene	mg/kg	0.1	0.000144322	20.000144167	200	0
			Acenaphthylene	mg/kg	0.1	0.000166725	80.001710766	200	0
			Acenaphthene	mg/kg	0.1	0.000252293	00.000246425	200	0
			Fluorene	mg/kg	0.1	0.004477269	80.003107529	200	0
			Phenanthrene	mg/kg	0.1	0.004866711	00.005652567	200	0
			Anthracene	mg/kg	0.1	0.004574984	30.002400315	200	0
			Fluoranthene	mg/kg	0.1	0.001106977	70.010125538	200	0
			Pyrene	mg/kg	0.1	0.001307027	80.011238095	200	0
			Benzo(a)anthracene	mg/kg	0.1	0.006559120	30.010940700	200	0
			Chrysene	mg/kg	0.1	0.005813028	70.005937116	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.001566081	00.011017766	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	0.001482082	20.010694741	200	0
			Benzo(a)pyrene	mg/kg	0.1	0.001477709	00.006940544	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0	0.004351694	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	0	0	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.000778991	20.004917164	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	0	0	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.121	0.121	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	0.242	0.242	134	0
			Total PAH (18)	mg/kg	0.8	0	0	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.472487493	30.606322299	30	25
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.405381731	60.507909751	30	22
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.427286763	10.526745677	30	21

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242716.002	LB270698.014		Arsenic, As	mg/kg	1	3.368722283	85.39405325	53	46
			Cadmium, Cd	mg/kg	0.3	0.051211953	2 0.04131	200	0
			Chromium, Cr	mg/kg	0.5	15.41172520	6 14.372265375	33	7
			Copper, Cu	mg/kg	0.5	4.129731908	8 5.46014925	40	28
			Nickel, Ni	mg/kg	0.5	3.795317854	2 6.36070725	40	51 ②
			Lead, Pb	mg/kg	1	14.63023080	0 16.13052225	37	10
			Zinc, Zn	mg/kg	2	5.883229187	6 8.18247825	58	33
SE242716.004	LB270698.017		Arsenic, As	mg/kg	1	5.296752185	35.161173319	49	3
			Cadmium, Cd	mg/kg	0.3	0.012073516	2 0.061375	200	0
			Chromium, Cr	mg/kg	0.5	12.03276811	8 11.236782563	34	7
			Copper, Cu	mg/kg	0.5	5.996010000	7 10.525554621	36	55 ②
			Nickel, Ni	mg/kg	0.5	6.681685110	26.833255252	37	2
			Lead, Pb	mg/kg	1	16.33898890	9 5.287016806	36	7
			Zinc, Zn	mg/kg	2	10.17143436	5 10.281086134	50	1

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270691.014		TRH C10-C14	mg/kg	20	4.103955878	25.097170971	200	0
			TRH C15-C28	mg/kg	45	41.63059953	182.96599611	136	0
			TRH C29-C36	mg/kg	45	32.14950601	181.58735071	171	0
			TRH C37-C40	mg/kg	100	9.434432408	88.698964408	200	0
			TRH C10-C36 Total	mg/kg	110	0	0	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	0	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	4.430583660	65.192715290	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	0	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	34.97448716	436.089909931	167	0

SGS

DUPLICATES

SE242583 R0

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The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270691.014	TRH F Bands	TRH >C34-C40 (F4)	mg/kg	120	17.649010038	46.609133833	200	0
SE242716.004	LB270691.021		TRH C10-C14	mg/kg	20	6.467664370	226.533587222	151	28
			TRH C15-C28	mg/kg	45	9.562117333	917.615659566	200	0
			TRH C29-C36	mg/kg	45	4.209486734	28.5103312774	200	0
			TRH C37-C40	mg/kg	100	0.292813490	11.2391866902	200	0
			TRH C10-C36 Total	mg/kg	110	0	26.533587222	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	0	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	7.086086461	324.697061012	187	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	0	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	12.583952552	23.469586861	200	0
			TRH >C34-C40 (F4)	mg/kg	120	0.562201901	02.9468749647	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270693.014	Monocyclic	Benzene	mg/kg	0.1	0	0	200	0
		Aromatic	Toluene	mg/kg	0.1	0.001260090	50.0013235459	200	0
			Ethylbenzene	mg/kg	0.1	0.000531305	80.0006768583	200	0
			m/p-xylene	mg/kg	0.2	0.003523118	80.0035842855	200	0
			o-xylene	mg/kg	0.1	0.000548542	70.0005801914	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	0.001240270	00.0012734343	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.284301970	98.7037968995	50	5
			d8-toluene (Surrogate)	mg/kg	-	8.247198722	28.6639253983	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.425532957	88.7330514578	50	4
		Totals	Total BTEX*	mg/kg	0.6	0	0	200	0
			Total Xylenes*	mg/kg	0.3	0.004071661	50.0041644770	200	0
SE242716.004	LB270693.021	Monocyclic	Benzene	mg/kg	0.1	0	0	200	0
		Aromatic	Toluene	mg/kg	0.1	0.000805610	10.0008355854	200	0
			Ethylbenzene	mg/kg	0.1	0.000411239	50.0003557131	200	0
			m/p-xylene	mg/kg	0.2	0.002937834	20.0029148488	200	0
			o-xylene	mg/kg	0.1	0.000293550	40.0002162182	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	0.000637077	50.0006078864	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.434383589	69.0150378008	50	7
			d8-toluene (Surrogate)	mg/kg	-	8.518999745	68.9440692962	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.509181089	58.9161114197	50	5
		Totals	Total BTEX*	mg/kg	0.6	0	0	200	0
			Total Xylenes*	mg/kg	0.3	0.003231384	70.0031310671	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242613.005	LB270693.014		TRH C6-C10	mg/kg	25	0.089094542	20.0736644630	200	0
			TRH C6-C9	mg/kg	20	0.072430526	90.0577771415	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.284301970	98.7037968995	30	5
			d8-toluene (Surrogate)	mg/kg	-	8.247198722	28.6639253983	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.425532957	88.7330514578	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	0	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	0.089094542	20.0736644630	200	0
SE242716.004	LB270693.021		TRH C6-C10	mg/kg	25	0.064761864	80.1038527639	200	0
			TRH C6-C9	mg/kg	20	0.051308835	60.0770706783	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.434383589	69.0150378008	30	7
			d8-toluene (Surrogate)	mg/kg	-	8.518999745	68.9440692962	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.509181089	58.9161114197	30	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	0	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	0.064761864	80.1038527639	200	0

SGS

LABORATORY CONTROL SAMPLES

SE242583 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270704.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	114

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270691.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	95
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	104
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	99
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	99
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	96
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	93
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.15	40 - 130	113

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270691.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	87
		Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	88
		Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	86
		Ethion	mg/kg	0.2	1.4	2	60 - 140	71
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270691.002		Naphthalene	mg/kg	0.1	4.2	4	60 - 140	104
		Acenaphthylene	mg/kg	0.1	4.3	4	60 - 140	107
		Acenaphthene	mg/kg	0.1	4.2	4	60 - 140	104
		Phenanthrene	mg/kg	0.1	4.1	4	60 - 140	102
		Anthracene	mg/kg	0.1	4.1	4	60 - 140	103
		Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	111
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	109
		Benzo(a)pyrene	mg/kg	0.1	4.7	4	60 - 140	118
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270698.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	109
	Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	86
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	103
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	110
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	104
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	280	273	80 - 120	103

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270691.002		TRH C10-C14	mg/kg	20	39	40	60 - 140	98
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	99
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	84
	TRH F Bands	TRH >C10-C16	mg/kg	25	40	40	60 - 140	100
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	99
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270693.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.2	5	60 - 140	84
		Toluene	mg/kg	0.1	4.3	5	60 - 140	86
		Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	88
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140	84
		o-xylene	mg/kg	0.1	4.5	5	60 - 140	91
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.3	10	70 - 130	103

LABORATORY CONTROL SAMPLES

SE242583 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270693.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	10.3	10	70 - 130	103
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.0	10	70 - 130	100

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270693.002		TRH C6-C10	mg/kg	25	90	92.5	60 - 140	97
		TRH C6-C9	mg/kg	20	77	80	60 - 140	97
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.3	10	70 - 130	103
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.0	10	70 - 130	100
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	64	62.5	60 - 140	102

SGS

MATRIX SPIKES

SE242583 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242583.004	LB270704.004	Mercury	mg/kg	0.05	0.26	0.05	0.2	102

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242613.001	LB270691.023		Naphthalene	mg/kg	0.1	3.9	0.00131310377	4	98
			2-methylnaphthalene	mg/kg	0.1	<0.1	0.00070533650	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	0.00073721647	-	-
			Acenaphthylene	mg/kg	0.1	4.1	0.00113638033	4	103
			Acenaphthene	mg/kg	0.1	4.0	0.00031495519	4	99
			Fluorene	mg/kg	0.1	<0.1	0.00059986931	-	-
			Phenanthrene	mg/kg	0.1	3.9	0.00538318167	4	97
			Anthracene	mg/kg	0.1	3.9	0.00133387250	4	98
			Fluoranthene	mg/kg	0.1	4.1	0.00419055601	4	101
			Pyrene	mg/kg	0.1	4.1	0.00394310099	4	101
			Benzo(a)anthracene	mg/kg	0.1	<0.1	0.00757213302	-	-
			Chrysene	mg/kg	0.1	<0.1	0.00256043265	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.00515126267	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.00493252322	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.3	0.00317122304	4	109
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.00231078279	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.00276776806	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.3	0	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.4	0.121	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.5	0.242	-	-
			Total PAH (18)	mg/kg	0.8	32	0	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.0	0.39617352900	-	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.0	0.35801277002	-	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.0	0.40240725458	-	0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242583.004	LB270698.004	Arsenic, As	mg/kg	1	49	5	50	88
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	89
		Chromium, Cr	mg/kg	0.5	73	36	50	74
		Copper, Cu	mg/kg	0.5	74	30	50	88
		Nickel, Ni	mg/kg	0.5	54	8.1	50	92
		Lead, Pb	mg/kg	1	100	55	50	90
		Zinc, Zn	mg/kg	2	390	370	50	40 Ⓢ

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242583.004	LB270691.023		TRH C10-C14	mg/kg	20	65	<20	40	140
			TRH C15-C28	mg/kg	45	1600	1400	40	467 Ⓢ
			TRH C29-C36	mg/kg	45	190	130	40	150 Ⓢ
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	1800	1500	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	1800	1500	-	-
		TRH F	TRH >C10-C16	mg/kg	25	73	<25	40	147 Ⓢ
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	73	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	1700	1500	40	493 Ⓢ
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242583.001	LB270693.004	Monocyclic	Benzene	mg/kg	0.1	3.7	<0.1	5	74
		Aromatic	Toluene	mg/kg	0.1	4.0	<0.1	5	79
			Ethylbenzene	mg/kg	0.1	4.3	<0.1	5	85
			m/p-xylene	mg/kg	0.2	8.4	<0.2	10	84
			o-xylene	mg/kg	0.1	4.5	<0.1	5	90

MATRIX SPIKES

SE242583 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242583.001	LB270693.004	Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.6	10	90
			d8-toluene (Surrogate)	mg/kg	-	8.4	8.9	10	84
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	9.2	10	90
		Totals	Total BTEX*	mg/kg	0.6	25	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	13	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242583.001	LB270693.004		TRH C6-C10	mg/kg	25	78	<25	92.5	83
			TRH C6-C9	mg/kg	20	67	<20	80	83
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.6	10	90
			d8-toluene (Surrogate)	mg/kg	-	8.4	8.9	10	84
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	9.2	-	90
		VPH F	Benzene (F0)	mg/kg	0.1	3.7	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	53	<25	62.5	84

MATRIX SPIKE DUPLICATES

SE242583 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

SGS

FOOTNOTES

SE242583 R0

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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source: Sydney.pdf page: 1 SGS Ref: SE242583_COC

Chain of Custody Form – Ref 15156-3

Sheet 1 of 1

Ref:	**15156-3**		**Sample matrix**			**Sample preservation**			**Analysis**						
Investigator:	Envirowest Consulting 9 Cameron Place PO Box 8158 ORANGE NSW 2800								**SGS Method Code**						
Telephone:	(02) 6361 4954								**CL5**	**SV3**	**CL10**				
Email:	[redacted]														
Contact Person:	Felipe Canavez														
Invoice:	accounts@envirowest.net.au														
Laboratory:	SGS SYDNEY 16/33 Maddox Street ALEXANDRIA NSW 2015		Water	Soil	Sludge	Cool	HNO3/HCl	Unpre-served	TRH, BTEXN	OC/OP pesticides	TRH, PAH, BTEX, 8 Metals				
Quotation #:	Envir_70119_2019														
Courier/CN:	Grants Express														
Sample ID	**Container***	**Sampling Date/Time**													
1 BH1(2000)	A	2/02/2023		X		X		X	X						
2 BH2(2000)	A	2/02/2023		X		X		X	X						
3 BH3(2000)	A	2/02/2023		X		X		X	X						
4 HS21	A	2/02/2023		X		X		X		X	X				
5 DA9	A	2/02/2023		X		X		X	X						

SGS EHS Sydney COC
SE242583

Investigator: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: Felipe Canavez
Date: 2/2/2023 Time: 11:00

Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time
Virginia Brage [redacted]	Date: 2/2/2023	12:00	[redacted]	03/02/23	@ 6:55

Please return completed form to Envirowest Consulting, *A = Solvent rinsed glass jar with Teflon lined lid and green label, B= Plastic with green label, C= Amber with green label, D= Vial with white label, E= Plastic with red label

Appendix 4. Soil sampling protocols

1. Sampling

The samples will be collected from the auger tip, mattock, hand auger or excavator bucket immediately on withdrawal.

The time between retrieval of the sample and sealing of the sample container will be kept to a minimum.

The material will be collected using single use disposal gloves or a stainless-steel spade which represented material which has not been exposed to the atmosphere prior to sampling.

All sampling jars will be filled as close to the top as possible to minimise the available airspace within the jar.

2. Handling, containment and transport

Daily sampling activities will be recorded including sampling locations, numbers, observations, measurements, sampler, date and time and weather condition.

The sampling jars will be new sterile glass jars fitted with plastic lid and airtight Teflon seals, supplied by the laboratories for the purpose of collecting soil samples for analysis. Sample containers will be marked indelibly with the sample ID code to waterproof labels affixed to the body of the container.

All samples will be removed from direct sunlight as soon as possible after sampling and placed in insulated containers. Samples will be stored in a refrigerator at 4°C prior to transportation to the laboratory in insulated containers with ice bricks in accordance with AS4482.1.

Handling and transportation to the laboratory will be accompanied with a chain of custody form to demonstrate the specimens are properly received, documents, processed and stored.

Maximum holding time for extraction (AS4482.1) are:

Analyte	Maximum holding time
Metals	6 months
Mercury	28 days
Sulfate	7 days
Organic carbon	7 days
OCP, OPP, PCB	14 days
TRH, BTEX, PAH, phenols	14 days

3. Decontamination of sampling equipment

Sampling tools will be decontaminated between sampling locations by

- Removing soil adhering to the sampling equipment by scraping, brushing or wiping
- Washing with a phosphate-free detergent
- Rinsing thoroughly with clean water
- Repeating if necessary
- Collect rinsate per sampling time and preserve according to AS 2031.1
- Dry equipment with disposable towels or air

Appendix 5. Analytical results – heavy metals and pesticides

Table A5.1. General site analytical results and threshold concentrations - heavy metals (mg/kg)

Sample ID	Arsenic	Cadmium	Chromium (total)	Copper	Lead	Nickel	Zinc	Mercury
CR1	3	<0.3	10	15	20	3.5	78	0.05
CR2	2	<0.3	9.6	11	11	2.5	21	<0.05
CR3	5	<0.3	8.2	17	30	1.7	14	<0.05
CR4	10	<0.3	5.3	16	48	0.9	17	<0.05
CR5	2	<0.3	5.5	27	9	1.9	30	<0.05
CR6	2	<0.3	17	18	9	2.4	25	<0.05
CR7	1	<0.3	7.8	10	6	1.6	11	<0.05
CR8	1	<0.3	7.7	4.7	6	1.2	9	<0.05
CR9	3	<0.3	6.4	14	12	1.5	17	<0.05
CR10	27	<0.3	9.4	31	83	1.7	13	<0.05
CR11	23	<0.3	8.9	27	60	1.7	14	<0.05
CR12	2	<0.3	18	16	10	4.0	140	<0.05
CR13	3	<0.3	15	10	15	4.7	46	<0.05
CR14	24	<0.3	9.8	41	100	2.2	14	<0.05
CR15	18	<0.3	7.5	37	93	1.7	14	<0.05
CR16	5	<0.3	5.9	15	21	1.1	8	<0.05
CR17	1	<0.3	4.9	7.9	6	0.9	9	<0.05
CR18	<1	<0.3	4.8	6.6	5	1.0	7	<0.05
CR19	<1	<0.3	6.1	8.1	5	1.3	13	<0.05
CR20	2	<0.3	8.2	8.6	7	1.5	13	<0.05
CR21	59	0.3	15	**110**	200	3.4	35	0.08
CR22	30	<0.3	16	56	110	4.0	18	<0.05
CR23	37	<0.3	11	77	130	4.0	26	0.06
CR24	3	<0.3	13	16	11	4.7	28	<0.05
CR25	26	<0.3	19	59	95	4.0	69	<0.05
CR26	25	<0.3	11	68	120	2.8	26	0.08
CR27	2	<0.3	12	24	11	3.9	18	<0.05
CR28	3	<0.3	17	18	11	4.4	24	<0.05
CR29	2	<0.3	22	11	12	5.0	110	<0.05
CR30	2	<0.3	10	16	10	3.4	16	<0.05
CR31	13	<0.3	13	22	44	3.1	20	<0.05
CR32	2	<0.3	11	12	8	3.4	20	<0.05
CR33	1	<0.3	8.6	14	8	2.6	20	<0.05
CR34	2	<0.3	16	21	9	4.6	20	<0.05
CR35	3	<0.3	24	26	12	5.8	27	<0.05
CR36	2	<0.3	12	24	7	2.8	20	<0.05
CR37	1	<0.3	9.6	16	6	1.7	12	<0.05
CR38	<1	<0.3	6.7	12	5	1.4	11	<0.05
CR39	2	<0.3	6.6	12	4	1.1	10	<0.05
CR40	2	<0.3	9.8	12	9	2.2	14	<0.05
CR41	2	<0.3	5.3	16	8	1.8	32	<0.05
CR42	1	<0.3	10	21	6	1.7	21	<0.05
CR43	1	<0.3	8.3	23	6	1.6	14	<0.05
CR44	2	<0.3	11	23	6	1.9	16	<0.05
CR45	1	<0.3	5.9	22	5	1.4	24	<0.05
CR46	2	<0.3	8.6	34	12	2.0	39	<0.05
CR47	1	<0.3	8.6	30	10	1.7	35	<0.05
CR48	2	<0.3	17	32	9	3.4	28	<0.05
CR49	2	<0.3	18	30	10	3.5	15	<0.05
CR50	2	<0.3	14	46	8	3.3	22	<0.05
CR51	2	<0.3	14	38	9	4.2	20	<0.05
CR52	1	<0.3	24	36	8	3.3	13	<0.05
CR53	1	<0.3	9.5	35	6	2.2	13	<0.05
CR54	1	<0.3	9.1	24	6	1.9	10	<0.05
CR55	3	<0.3	20	35	14	2.0	11	<0.05

Sample ID	Arsenic	Cadmium	Chromium (total)	Copper	Lead	Nickel	Zinc	Mercury
CR56	7	<0.3	11	32	28	2.0	14	<0.05
CR57	24	<0.3	8.3	39	98	1.6	18	0.06
CR58	11	<0.3	6.9	37	43	1.8	18	<0.05
CR59	11	<0.3	8.3	45	48	1.8	20	<0.05
CR60	11	<0.3	10	49	49	1.9	21	0.05
CR61	2	<0.3	12	34	7	2.4	15	<0.05
CR62	2	<0.3	13	34	7	2.5	14	<0.05
CR63	2	<0.3	13	40	8	3.5	18	<0.05
CR64	3	<0.3	21	43	12	5.2	31	<0.05
CR65	2	<0.3	22	51	10	3.8	26	<0.05
CR66	1	<0.3	11	28	8	2.3	23	<0.05
CR67	3	<0.3	29	67	18	5.5	60	<0.05
CR68	2	<0.3	17	32	10	3.2	53	<0.05
CR69	3	<0.3	24	46	13	5.2	100	<0.05
CR70	5	<0.3	24	41	24	6.1	46	<0.05
CR71	3	<0.3	13	32	13	3.4	28	<0.05
CR72	3	<0.3	13	29	14	4.8	21	<0.05
CR73	2	<0.3	12	35	13	3.4	18	<0.05
CR74	3	<0.3	8.8	24	16	2.1	13	<0.05
CR75	2	<0.3	7.3	19	12	1.6	20	<0.05
CR76	2	<0.3	6.8	21	10	1.5	14	<0.05
CR77	3	<0.3	7.0	18	12	1.8	15	<0.05
CR78	6	<0.3	10	34	26	2.4	12	<0.05
CR79	5	<0.3	17	33	24	3.3	13	<0.05
CR80	4	<0.3	19	31	20	4.0	18	<0.05
CR81	6	<0.3	14	42	26	4.1	19	<0.05
CR82	5	<0.3	15	35	23	4.6	65	<0.05
CR83	8	<0.3	26	65	240	6.3	22	<0.05
CR84	6	<0.3	22	**130**	30	5.1	32	<0.05
CR85	7	<0.3	15	63	30	4.2	15	<0.05
CR86	6	<0.3	18	50	26	4.9	30	<0.05
CR87	4	<0.3	13	33	22	5.2	31	<0.05
CR88	5	<0.3	10	28	22	3.4	27	<0.05
CR89	3	<0.3	7.5	20	16	2.3	11	<0.05
CR90	2	<0.3	5.9	18	14	1.5	18	<0.05
CR91	<1	<0.3	6.8	12	12	2.2	98	<0.05
CR92	2	<0.3	11	9.5	11	3.3	24	<0.05
CR93	<1	<0.3	6.6	6.1	11	2.1	11	<0.05
CR94	<1	<0.3	6.4	6.5	11	1.8	11	<0.05
CR95	<1	<0.3	6.7	3.6	8	1.3	8	<0.05
CR96	<1	<0.3	5.9	5.1	8	1.7	24	<0.05
CR97	<1	<0.3	5.9	3.5	8	1.3	12	<0.05
CR98	<1	<0.3	7.6	7.7	8	2.1	21	<0.05
CR99	<1	<0.3	6.9	3.8	8	1.4	14	<0.05
CR100	<1	<0.3	6.1	3.1	6	1.2	10	<0.05
CR101	1	<0.3	5.2	4.1	6	1.1	16	<0.05
CR102	1	<0.3	7.4	3.8	6	1.4	11	<0.05
CR103	1	<0.3	8.5	6.8	8	2.9	11	<0.05
CR104	<1	<0.3	7.6	5.7	7	1.8	8.4	0.05
CR105	2	<0.3	10	15	12	2.2	13	<0.05
CR106	2	<0.3	9.5	12	17	2.9	60	<0.05
CR107	62	0.4	18	**120**	220	3.3	41	<0.05
CR108	1	<0.3	5.9	15	9	1.7	22	<0.05
CR109	1	<0.3	13	45	8	3.0	14	<0.05
CR110	7	<0.3	15	60	30	4.3	13	<0.05
CR111	<1	<0.3	5.4	2.7	7	1.2	11	<0.05
CR112	<1	<0.3	6.2	4.3	6	1.3	12	<0.05

Sample ID	Arsenic	Cadmium	Chromium (total)	Copper	Lead	Nickel	Zinc	Mercury
CR113	2	<0.3	9.6	17	61	8.7	97	<0.05
CR114	4	0.8	10	50	37	3.7	**510**	<0.05
CR115	10	<0.3	20	69	15	5.1	97	<0.05
CR116	3	<0.3	13	20	51	3.4	**480**	<0.05
CR117	<1	<0.3	6.3	16	19	2.4	**250**	<0.05
CR118	1	<0.3	6.5	3.3	8	1.3	13	<0.05
CR119	<1	<0.3	5.5	2.9	8	1.1	11	<0.05
CR120	<1	<0.3	5.5	3.2	10	1.3	6.9	<0.05
CR121	<1	<0.3	6.0	5.0	9	1.9	12	<0.05
CR122	<1	<0.3	5.5	5.8	8	2.0	10	<0.05
Arithmetic mean	5.48	0.30	11.34	27.36	25.79	2.77	34.76	0.05
Standard deviation	9.77	0.05	5.42	22.66	39.98	1.43	67.08	0.00
Maximum	62.00	0.80	29.00	130.00	240.00	8.70	510.00	0.08
Median	2.00	0.30	9.90	22.00	11.00	2.30	18.00	0.05
Confidence interval	1.73	0.01	0.96	4.02	7.09	0.25	11.90	0.00
95% UCL	7.22	0.31	12.30	31.38	32.88	3.03	46.67	0.05
Number	122	122	122	122	122	122	122	122
Health Investigation Levels – Residential land-use threshold (NEPC 1999)								
	100	*20*	*100[1]*	*6,000*	*300*	*400*	*7,400*	*40*
Ecological Investigation Levels – Residential land-use threshold (NEPC 1999)								
	100	*-*	*290[2]*	*95*	*1,100*	*25*	*200*	*-*

[1] Threshold for Chromium (VI), [2] Threshold for Chromium (III)

Statistical analysis assumes the value of non-detects are equal to the detection limit. This is considered a conservative approach.

Table A5.2. General site analytical results and threshold concentrations - OCP (mg/kg)

Sample ID	OCP	DDs	DDT
CR4	<1	<0.1	<0.1
CR8	<1	<0.1	<0.1
CR12	<1	<0.1	<0.1
CR16	<1	<0.1	<0.1
CR20	<1	<0.1	<0.1
CR24	<1	<0.1	<0.1
CR28	<1	<0.1	<0.1
CR32	<1	<0.1	<0.1
CR36	<1	<0.1	<0.1
CR40	<1	<0.1	<0.1
CR44	<1	<0.1	<0.1
CR48	<1	0.3	<0.1
CR52	<1	<0.1	<0.1
CR56	<1	<0.1	<0.1
CR60	<1	0.2	<0.1
CR64	<1	<0.1	<0.1
CR68	<1	0.4	<0.1
CR72	<1	<0.1	<0.1
CR76	<1	0.3	<0.1
CR80	<1	<0.1	<0.1
CR84	<1	<0.1	<0.1
CR88	<1	<0.1	<0.1
CR92	<1	<0.1	<0.1
CR96	<1	<0.1	<0.1
CR100	<1	<0.1	<0.1
CR104	<1	<0.1	<0.1
CR108	<1	<0.1	<0.1
CR112	<1	<0.1	<0.1
CR116	<1	<0.1	<0.1
CR120	<1	<0.1	<0.1
Arithmetic mean	1.00	0.13	0.10
Standard deviation	0.00	0.07	0.00
Maximum	1.00	0.03	0.00
Median	1.00	0.15	0.10
Confidence interval	0.00	0.03	0.00
95% UCL	1.00	0.15	0.10
Number	30	30	30
Health Investigation Levels – Residential land-use threshold (NEPC 1999)			
	-	*240*	-
Ecological Investigation Levels – Residential land-use threshold (NEPC 1999)			
	-	-	*180*

Statistical analysis assumes the value of non-detects are equal to the detection limit. This is considered a conservative approach

Appendix 6. EW Testing Services laboratory report

Envirowest Consulting Pty Ltd ABN 18 103 955 246 trading as
EW Testing Services
• 9 Cameron Place, PO Box 8158, Orange NSW 2800 • Tel (02) 6361 4954 •
• Email admin@envirowest.net.au • Web www.envirowest.net.au •

Environmental
Geotechnical
Asbestos
Services

ASBESTOS IDENTIFICATION REPORT

Client	Fenlor	Report number	LR15156id
Contact	Dave Fenton		
Address	1 Borrodell Drive Orange NSW 2800	Date	03 February 2023

Site location	277 Cargo Road Orange NSW, 2800
Sampled by	Greg Madafiglio
Date received	30 January 2023
Date tested	03 February 2023
Test method	Identification using polarized light microscopy with dispersion staining in accordance with *Method for the qualitative identification of asbestos in bulk samples* (AS4964-2004) and EW Testing Services in-house method TA2.

Sample ID	Location	Description	Results
15156-1	Packing shed	7g Floor lining	
		(A) Vinyl sheet	(A) No asbestos detected *
		(B) Woven product	(B) No asbestos detected Organic fibres present
		(C) Bituminous membrane	(C) No asbestos detected. * Organic fibres present

Comments:
* Trace analysis performed.
- Sample ID 15156-1/C - fibrous

Sampling: NATA accreditation does not cover the performance of this service
This report shall not be reproduced except in full without written permission of EW Testing Services.

[redacted]
Carmen King
Approved asbestos analyst

NATA
Accredited for compliance with
ISO/IEC 17025 – Testing
Accreditation number: 19800

Appendix 7. Borelogs

Envirowest Consulting
9 Cameron Place Orange NSW
Phone: 02 6361 4954

Engineering Log - Borehole

Borehole No: BH1

UTM	: 55H	Driller Rig	: Eziprobe Landcruiser	Job Number	: 15156
Easting	: 691686.2	Driller Supplier	: Envirowest Consulting	Client	: Fenlor
Northing	: 6315148.3	Logged By	: Felipe Canavez	Project	: UPSS Assessment
RL	: N/A	Reviewed By	:	Location	: 277 Cargo Road, Orange NSW
Total Depth	: 2m	Date	: 02/02/2023		

Depth (m)	Soil Origin	Graphic Log	Classification Code	Material Description	Samples: Disturbed sample	Testing: PID	Remark
0.4	Topsoil		CL	Topsoil sandy SILT (CL) : firm, non-plastic, brown, fine grained sand, with fine to medium sized gravel, trace low plasticity clay, inorganic, w < pl.			No hydrocarbon odour
0.5	Natural		CL	Natural silty CLAY (CL) : firm, low plasticity, dark reddish brown, with fine sized gravel, trace fine grained sand, w < pl.		1.3	
1	Natural		CL-CI	Natural silty CLAY (CL-CI) : firm to stiff, low to medium plasticity, dark red, trace fine sized gravel, w < pl.	BH1(2000)	6.5	
2				**BH1 Terminated at 2m (Target depth)**			

Envirowest Consulting
9 Cameron Place Orange NSW
Phone: 02 6361 4954

Engineering Log - Borehole

Borehole No: BH2

UTM	: 55H	Driller Rig	: Eziprobe Landcruiser	Job Number	: 15156
Easting	: 691690.2	Driller Supplier	: Envirowest Consulting	Client	: Fenlor
Northing	: 6315143.7	Logged By	: Felipe Canavez	Project	: UPSS Assessment
RL	: N/A	Reviewed By	:	Location	: 277 Cargo Road, Orange NSW
Total Depth	: 2m	Date	: 01/02/2023		

Depth (m)	Soil Origin	Graphic Log	Classification Code	Material Description	Samples: Disturbed sample	Testing: PID	Remark
0.5	Topsoil		CL	Topsoil sandy SILT (CL) : firm, non-plastic, very dark brown brown, fine grained sand, with fine to medium sized gravel, trace low plasticity clay, inorganic, w < pl.			No hydrocarbon odour
1.2	Natural		CL	Natural silty CLAY (CL) : firm, low plasticity, dark reddish brown, with fine sized gravel, trace fine grained sand, w < pl.		2.1	
2	Natural		CL-CI	Natural silty CLAY (CL-CI) : firm to stiff, low to medium plasticity, dark red, trace fine sized gravel, w < pl.	BH2(2000)	4.5	
				BH2 Terminated at 2m (Target depth)			

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Envirowest Consulting
9 Cameron Place Orange NSW
Phone: 02 6361 4954

Engineering Log - Borehole

Borehole No: BH3

UTM	: 55H	Driller Rig	: Eziprobe Landcruiser	Job Number	: 15156
Easting	: 691684.9988909683	Driller Supplier	: Envirowest Consulting	Client	: Fenlor
Northing	: 6315141.572145873	Logged By	: Felipe Canavez	Project	: UPSS Assessment
RL	: N/A	Reviewed By	:	Location	: 277 Cargo Road, Orange NSW
Total Depth	: 2m	Date	: 01/02/2023		

Depth (m)	Soil Origin	Graphic Log	Classification Code	Material Description	Samples: Disturbed sample	Testing: PID	Remark
0	Topsoil		CL	Topsoil sandy SILT (CL) : firm, non-plastic, very dark brown brown, fine grained sand, with fine to medium sized gravel, trace low plasticity clay, inorganic, w < pl.			No hydrocarbon odour
0.4	Natural		CL	Natural silty CLAY (CL) : firm, low plasticity, dark reddish brown, with fine sized gravel, trace fine grained sand, w < pl.			
0.5						0	
1							
1.2	Natural		CL-CI	Natural silty CLAY (CL-CI) : firm to stiff, low to medium plasticity, dark red, trace fine sized gravel, w < pl.			
1.5							
2					BH3(2000)	0.9	
				BH3 Terminated at 2m (Target depth)			
2.5							
3							

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Appendix 8. Unidentified finds procedure

Unidentified finds procedure

1. Introduction
Residential land-use is proposed for 277 Cargo Road, Orange NSW.

A procedure is required describing the actions if potential contamination or hazards are encountered during demolition / soil disturbance / subdivision / excavation / construction activities.

2. Scope
Prepare a procedure to enable the identification and management of unexpected hazards identified during excavation works and/or construction activities.

3. Site identification
Lot A DP408148, 277 Cargo Road, Orange NSW.

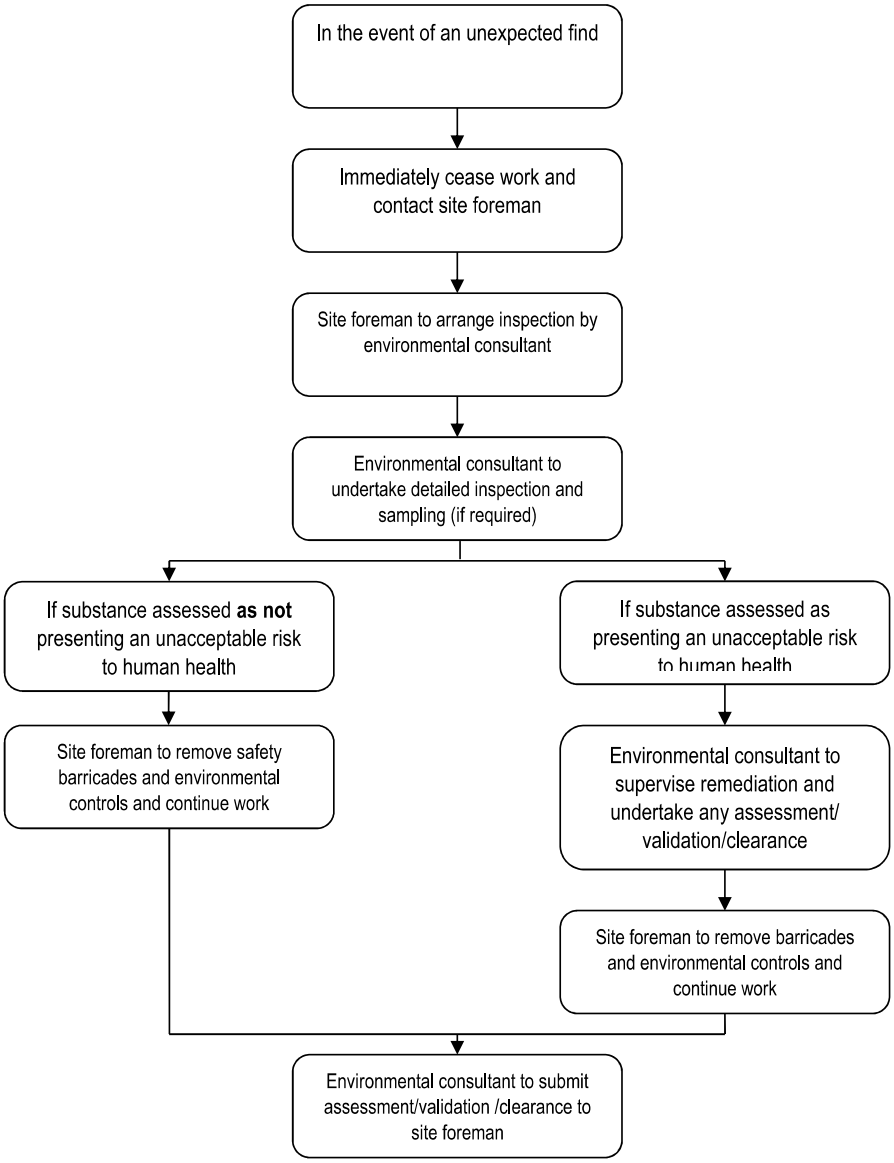
4. Responsible person
The landowner / site supervisor is responsible for implementation of the unexpected finds protocol. The landowner will appoint an environmental scientist to induct and provide information on hazard identification and responses to earthwork supervisors and personnel which may uncover unexpected hazards.

5. Identification of unexpected hazards
Potential hazards will be identified by appearance and odour include:

- A filled pit or gully
- Demolition waste
- Discoloured soil
- Oil/diesel/tar
- Sheens on water
- An offensive odour
- Asbestos cement sheeting
- Ash or slag
- Underground storage tank

6. Training and induction
All excavation/construction personnel are to be inducted on the identification of potential hazards. The induction can be undertaken at the time of general site induction and toolbox meetings. The training will include display of information to alert worker of potential hazards.

7. Procedure



8. Recommencement of works

The potential hazards will be assessed by the environmental scientist and a report prepared describing:

- Preliminary assessment of the contamination and need for clean-up
- Preparation of a remediation action plan
- All works to be undertaken in accordance with contaminated site regulations and guidelines
- Remediation works
- Validation of the remediation
- Works can commence on the potentially hazardous area after the environmental scientist has provided a clearance.

Information to assist workers in identifying hazards.

BE AWARE

UNEXPECTED HAZARDS MAY BE PRESENT


drums


asbestos


chemical bottles


blood stains


odour


ash / slag


demolition waste

if you SEE or SMELL anything unusual

STOP WORK & contact the Site Foreman

do not restart working before the area has been investigated and cleared by an Environmental Consultant

Acoustik
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ABN: 27238273391

27 April 2023 (REF: 2303.03.Letter.A_r1)

Christopher Fenton
Landorange Partnership
Orange NSW 2800

277 Cargo Road, Orange - Concept Layout Traffic Noise Assessment

1 Executive Summary

The rezoning of the subject site for residential will require acoustic treatments for dwellings where the building façade is setback from the near kerb side of Cargo Road 78 metres or less.

Orange City Council's controls require the property boundary has a minimum setback of 15m from the road kerb. Dwellings building facades with setback at least 28 metres from the kerb side of Cargo Road require the lowest category of acoustic treatment (Category 1) as listed in the Interim Guideline for 'Development near rail corridors & busy roads' (The Guide). Dwelling with façade setbacks less than 28 metres require Category 2 acoustic treatment.

Dwellings can be designed to minimise traffic noise and building costs by locating utility or non-habitable rooms so that they face the busy road. Bedrooms and living areas, if possible, should away from the busy road.

2 Introduction

Acoustik was engaged by Christopher Fenton to provide a traffic noise assessment for the proposed development at 277 Cargo Road, Orange (Lot A – DP408148). Stage 1 of the subdivision proposes 51 lots where 2 lots have existing dwellings from the original Lot A.

This assessment is based on the recommendations of the NSW Department of Planning document[1] "Development Near Rail Corridors and Busy Roads – Interim Guideline" (The Guide).

Lots numbered by Acoustik (1 to 18) in Figure 1 have at least part of the lot closer than 78 metres from the near kerb of Cargo Road and will need to consider traffic noise intrusion and acoustic treatment during construction as specified in The Guide. Lots numbered 15 and 16 will include the existing dwellings on rezoned lots. The full concept layout drawing is enclosed to this letter.

Cargo road is an arterial road connecting Orange to Western areas. The percentage of heavy vehicles using Cargo Road is ~ 6% of the traffic flow. The closest railway corridor is the Orange – Broken Hill railway line ~ 500 m to the south of the stage 1 site and 350 m to the south of the stage 2 site. Based on recommendations from Section 3.5.1 of The Guide, railway noise will not impact either stage.

[1] Development Near Rail Corridors and Busy Roads – Interim Guideline ISBN 978-0-7347-5504-9
©The State Government of NSW through the Department of Planning 2008 www.planning.nsw.gov.au

277 Cargo Road, Orange - Concept Layout Traffic Noise Assessment

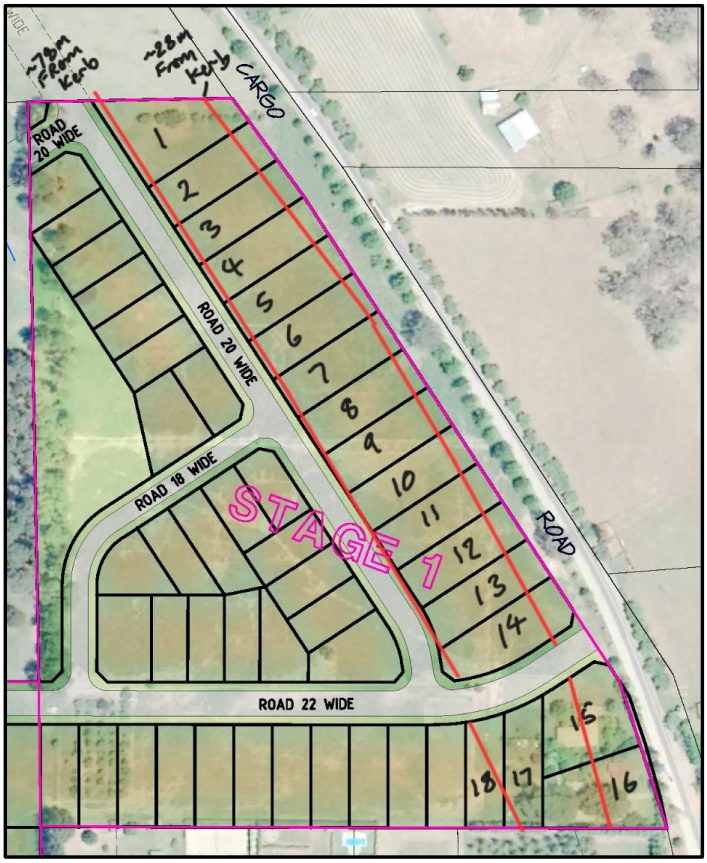

Figure 1: Stage 1 of Development – Adjacent to Cargo Road

3 Traffic Flow

Acoustik have reviewed the traffic flow data supplied by the proponent. The 10-year increase in traffic flow is presented in Table 1 below.

Table 1: Traffic Flow Data and 10-year projections

Road Name	Traffic Vol (ADT)		Heavy Vehicles	Speed	Road Pavement Surface
Cargo Road – West of Wilton Place[1]	**2023**	**2033**	6%	60 - 70 km/h	Asphalt
	4,069	6,023*			

Note 1: ADT weekday average data Supplied to Acoustik by Traffic Information Specialist based on data measured starting 1 March 2023 for a period of 7 days. The supplied data indicates that the road speed is in the range of 60 km/h to 70 km/h.

Note *: Predicted future traffic flows based on OCC annual traffic growth of 4% at 10 years from the current year of this letter.

Page 17 of the Interim Guide provides a screening test to determine the category of acoustic treatment that is applicable for single dwellings located set distances from the major road against the Traffic volumes (AADT) levels. The screening test diagram for 60/70 km/h roads for single dwellings is shown in Figure 2.

277 Cargo Road, Orange - Concept Layout Traffic Noise Assessment

The screening test is marked for a flow of 6,023 vehicles. Residences constructed 28m to 78m from the kerb side of Cargo Road require Category 1 Acoustic treatment. For a residence constructed closer than 28m from the kerb of Cargo Road Category 2 treatment is required.

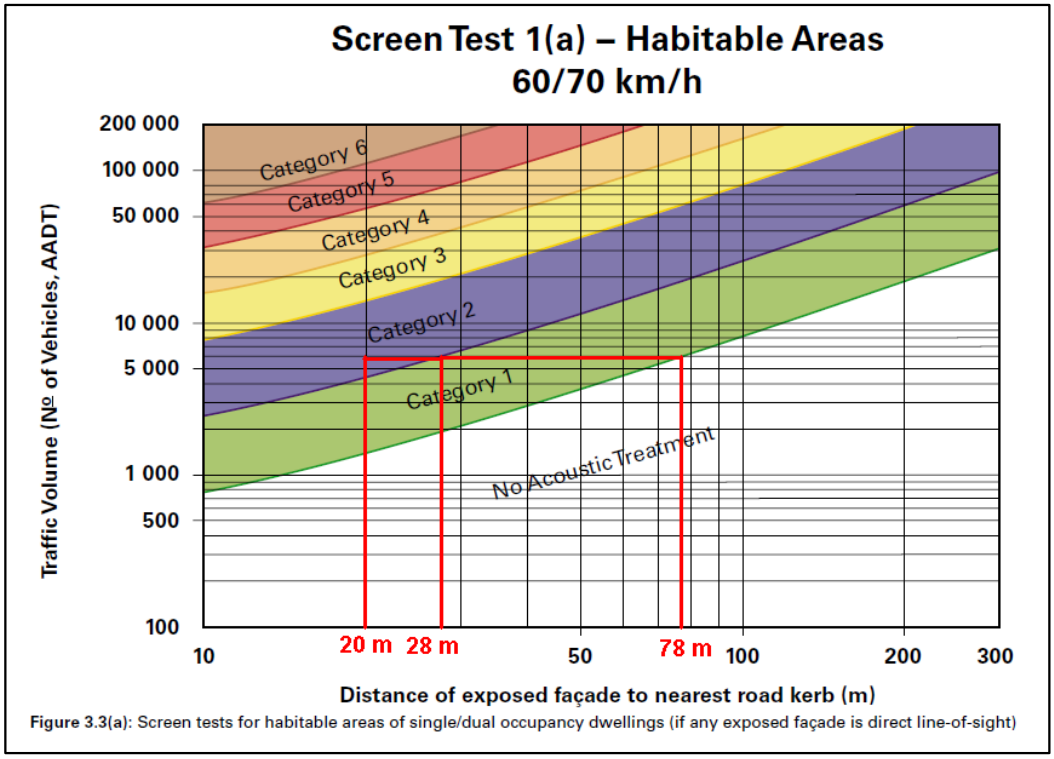

Figure 2: Screening Test, Page 17- Interim Guide, Category 1 and 2 AADT

4 Acoustic Treatments

Recommended acoustic treatments for residences within category 1 and 2 rated areas of Stage 1 are based on the measured traffic volumes allowing for the expected increase in traffic flows over the next ten years.

The recommended acoustic ratings for the building elements are listed in Figure 3 below which is extracted from Appendix C of The Guide.

277 Cargo Road, Orange - Concept Layout Traffic Noise Assessment

ACOUSTIC PERFORMANCE OF BUILDING ELEMENTS

The acoustic performances assumed of each building element in deriving the Standard Constructions for each category of noise control treatment presented in the preceding Table, are presented below in terms of Weighted Sound Reduction Index (Rw) values, which can be used to find alternatives to the standard constructions presented in this Appendix:

Category of Noise Control Treatment	R_w of Building Elements (minimum assumed)				
	Windows/Sliding Doors	Frontage Facade	Roof	Entry Door	Floor
Category 1	24	38	40	28	29
Category 2	27	45	43	30	29
Category 3	32	52	48	33	50
Category 4	35	55	52	33	50
Category 5	43	55	55	40	50

Figure 3: Minimum R_W of Building Elements

More detailed typical constructions are included in Appendix C of The Guide which is enclosed at the end of this letter. Note that non-habitable rooms do not need to be treated for noise intrusion.

Section 3.8 of The Guide provides valuable advice about using building orientation and layout to reduce noise levels within habitable rooms of the development.

Kitchens are notionally considered non habitable rooms but open plan kitchens that form part of the living areas are common. Where the kitchen is directly open to a habitable room the kitchen should be treated as habitable so that the adjacent habitable space is protected.

Where a habitable room requires acoustic treatment due a category definition, the following noise control measures outlined below are also applicable.

4.1 Generally

Lighting: To maintain the acoustic integrity of the ceiling/roof system all lighting fixtures must be surfaced mounted. In place of standard downlights acoustically rated downlights can be fitted.

Vents: To maintain the acoustic integrity of the ceiling/roof system all air conditioning or fresh air ventilation vents must have pillow boxes above the vent. The pillow box must have a 90 degree bend connection to flexible duct. Flexible ducts cannot be directly connected to ceiling vents.

External Walls: Any external ventilation openings in external wall must be located so that they do not directly face the busy road.

Entry Doors: Any entry door to the building that is visible from Cargo Road must be fitted with a door acoustically rated according to the Category type lookup tables.

Window types – Window building element types are recommended in the Category type lookup tables.

If double glazing is used in place of the building elements recommended in the category 1 and 2 tables, the minimum R_W ratings must still be achieved, and certification provided by the supplier.

All rooms where a R_W rating is specified for windows, the windows must be closed to achieve the acoustic outcomes.

4.2 Fresh Air-Ventilation

Where windows must be kept closed, room ventilation systems must meet the requirements of the Building Code of Australia and Australian Standard 1668 "The use of ventilation and airconditioning in buildings".

Section 4.4 "Mitigation Levels" of The Guide provides the following advice regarding mechanical ventilation. For additional information Section 4 "Air Quality near Busy Roads" of the Interim Guide contains design information.

> *"Mechanical ventilation systems provide an opportunity for filtering external fresh air entering a building (eg carbon-filters or similar). Where possible, mechanical ventilation air inlet ports should be sited to maximise the distance from the road to reduce inflows of air pollutants."* Page 35 of the The Guide.

5 Qualifications

Tom Harper BE (Mechanical), BA (Chinese Studies), MAAS

Mr Harper is a full member of the Australian Acoustical Society (Member since 2002). Working as an acoustic consultant since graduating from university of NSW in 1998 both domestically and internationally in Singapore and Southeast Asian countries.

Acoustik was established in August 2013 and provides a full range of professional acoustic consulting services.

For any enquires regarding the above measurement please contact Acoustik.

Sincerely,

Tom Harper

Digitally signed by Tom Harper
DN: cn=Tom Harper, o, ou=Acoustik, email=tom@acoustik.net.au, c=AU
Date: 2023.04.27 12:05:31 +10'00'

Tom Harper
Principal Engineer
Acoustik
Enclosed:
Appendix C - Development Near Rail Corridors and Busy Roads – Interim Guideline
Concept Layout Plan

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277 Cargo Road, Orange - Concept Layout Traffic Noise Assessment

Enclosed Documents

Appendix C - Development Near Rail Corridors and Busy Roads – Interim Guideline

Concept Layout Plan

Appendix C – Acoustic Treatment of Residences

The following table sets out standard (or deemed-to-satisfy) constructions for each category of noise control treatment for the sleeping areas and other habitable areas of single / dual occupancy residential developments only. The assumptions made in the noise modelling are as follows:

- Typical layout of a modern dwelling taken from a recent large residential development in an outer Sydney suburb
- Bedrooms and other habitable rooms are exposed to road noise

ACOUSTIC PERFORMANCE OF BUILDING ELEMENTS

The acoustic performances assumed of each building element in deriving the Standard Constructions for each category of noise control treatment presented in the preceding Table, are presented below in terms of Weighted Sound Reduction Index (Rw) values, which can be used to find alternatives to the standard constructions presented in this Appendix:

Category of Noise Control Treatment	R_w of Building Elements (minimum assumed)				
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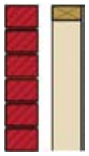
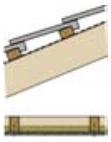
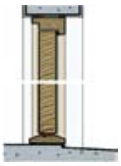
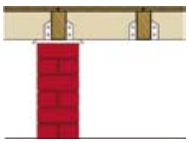
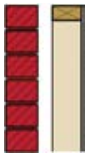
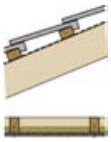
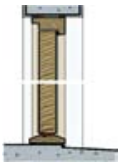
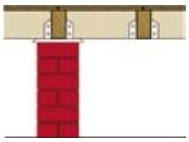
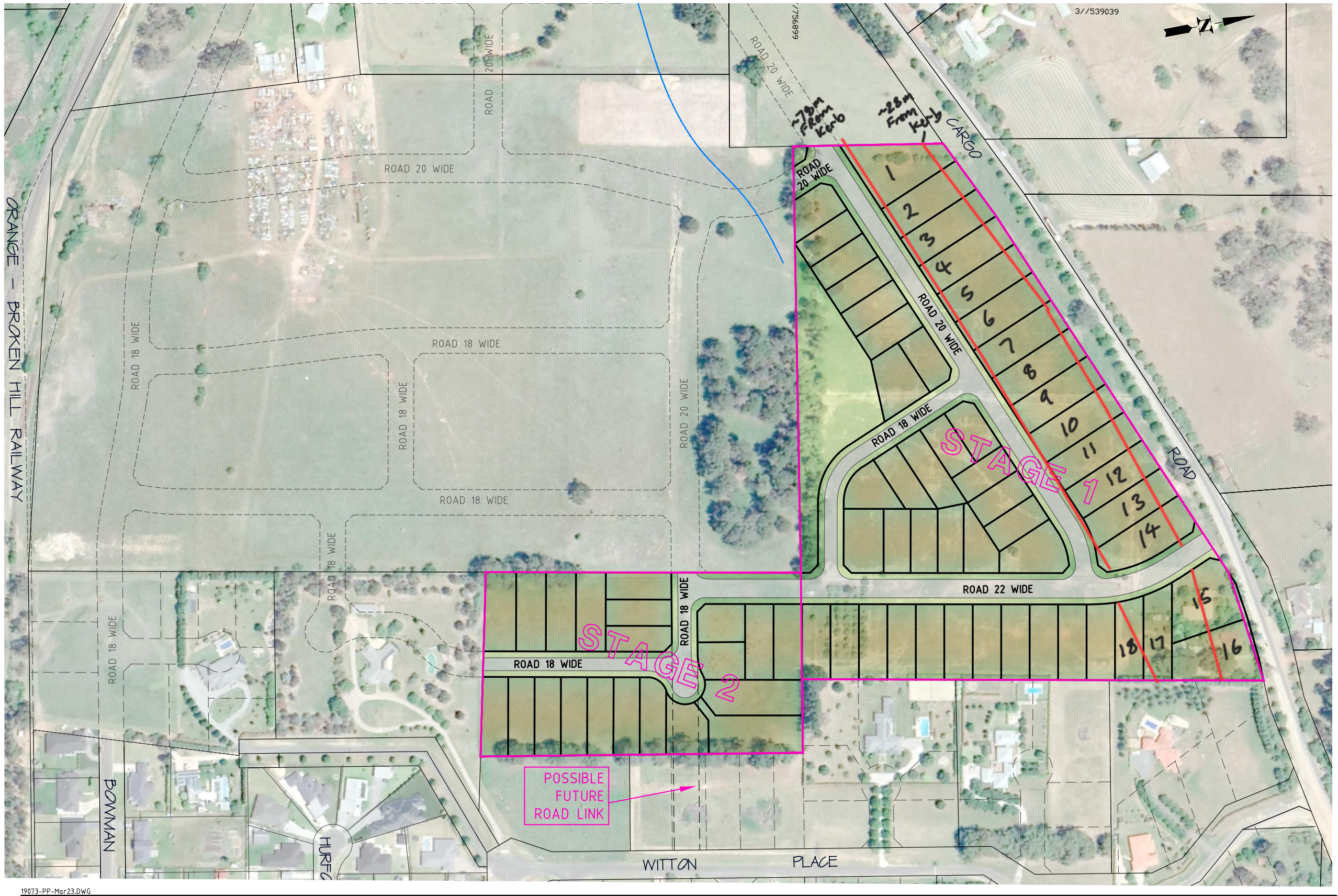
Category 3	32	52	48	33	50
Category 4	35	55	52	33	50
Category 5	43	55	55	40	50

Category No.	Building Element	Standard Constructions	sample
1	**Windows/Sliding Doors**	Openable with minimum 4mm monolithic glass and standard weather seals	
	Frontage Facade	**Timber Frame or Cladding:** 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally	
		Brick Veneer: 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally	
		Double Brick Cavity: 2 leaves of 110mm brickwork separated by 50mm gap	
	Roof	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, R1.5 insulation batts in roof cavity.	
	Entry Door	35mm solid core timber door fitted with full perimeter acoustic seals	
	Floor	1 layer of 19mm structural floor boards, timber joist on piers	
		Concrete slab floor on ground	

Category No.	Building Element	Standard Constructions	sample
2	**Windows/Sliding Doors**	Openable with minimum 6mm monolithic glass and full perimeter acoustic seals	
	Frontage Facade	**Timber Frame or Cladding Construction:** 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally with R2 insulation in wall cavity.	
		Brick Veneer Construction: 110mm brick, 90mm timber stud frame or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.	
		Double Brick Cavity Construction: 2 leaves of 110mm brickwork separated by 50mm gap	
	Roof	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, R2 insulation batts in roof cavity.	
	Entry Door	40mm solid core timber door fitted with full perimeter acoustic seals	
	Floor	1 layer of 19mm structural floor boards, timber joist on piers	
		Concrete slab floor on ground	



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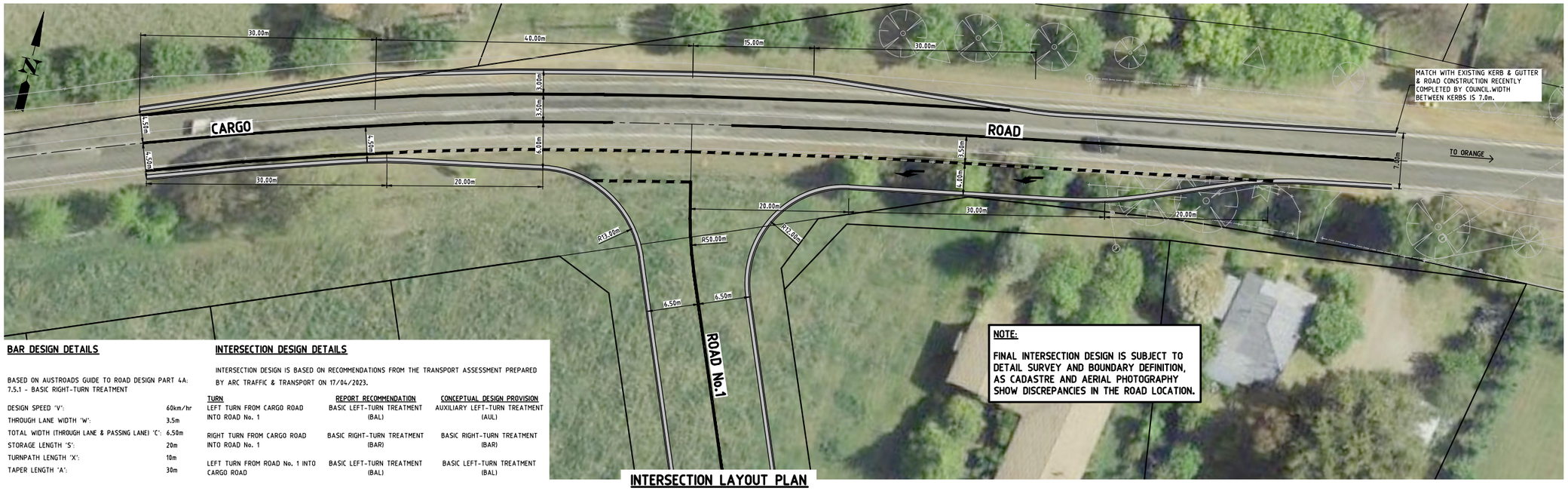
HEATH CONSULTING ENGINEERS

15 0 15 30 45 60 75m
SCALE 1:2500 (A3)

CONCEPT LAYOUT
LOT A D.P.408148



BAR DESIGN DETAILS

BASED ON AUSTROADS GUIDE TO ROAD DESIGN PART 4A: 7.5.1 - BASIC RIGHT-TURN TREATMENT

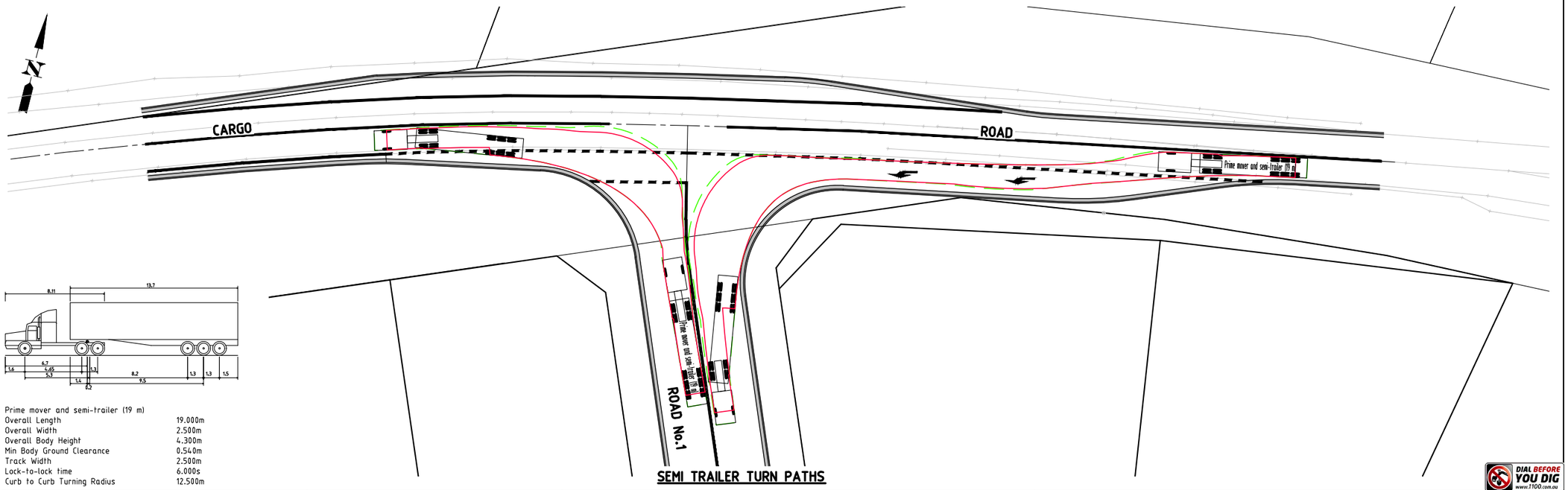
DESIGN SPEED 'V':	60km/hr
THROUGH LANE WIDTH 'W':	3.5m
TOTAL WIDTH (THROUGH LANE & PASSING LANE) 'C':	6.50m
STORAGE LENGTH 'S':	20m
TURNPATH LENGTH 'X':	10m
TAPER LENGTH 'A':	30m

INTERSECTION DESIGN DETAILS

INTERSECTION DESIGN IS BASED ON RECOMMENDATIONS FROM THE TRANSPORT ASSESSMENT PREPARED BY ARC TRAFFIC & TRANSPORT ON 17/04/2023.

TURN	REPORT RECOMMENDATION	CONCEPTUAL DESIGN PROVISION
LEFT TURN FROM CARGO ROAD INTO ROAD No. 1	BASIC LEFT-TURN TREATMENT (BAL)	AUXILIARY LEFT-TURN TREATMENT (AUL)
RIGHT TURN FROM CARGO ROAD INTO ROAD No. 1	BASIC RIGHT-TURN TREATMENT (BAR)	BASIC RIGHT-TURN TREATMENT (BAR)
LEFT TURN FROM ROAD No. 1 INTO CARGO ROAD	BASIC LEFT-TURN TREATMENT (BAL)	BASIC LEFT-TURN TREATMENT (BAL)

INTERSECTION LAYOUT PLAN



Prime mover and semi-trailer (19 m)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.000s
Curb to Curb Turning Radius	12.500m

SEMI TRAILER TURN PATHS

DIAL BEFORE YOU DIG www.1100.com.au

No.	DATE	AMENDMENT DESCRIPTION	APP'D
B	8/11/23	AMEND LINEMARKING	R.A.H
A	25/09/23	ISSUED FOR RMS APPROVAL	R.A.H.

SURVEY: - DATE:
DESIGN: R.A.H. DATE: SEPT. 2023
DRAWN BY: A.R. DATE: SEPT. 2023
CHECKED BY: DATE:

SCALES: 2.5 0 2.5 5 7.5 10 12.5m
SCALE 1:250 (A1) 1:500 (A3)

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HEATH CONSULTING ENGINEERS
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351 SUMMER STREET
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ORANGE NSW 2800
Telephone: (02) 6360 0755
Facsimile: (02) 6360 0766
Email: admin@heathce.com

CLIENT: LANDORANGE PARTNERSHIP
PROJECT: PROPOSED DEVELOPMENT LOT A D.P.408148, 277 CARGO ROAD, ORANGE
Sheet No. 1 of 1 Sheets
JOB No. 19_073
DRAWING No. 19073-INT01
DRAWING TITLE: CONCECPTUAL INTERSECTION LAYOUT
REV. B

Deed

277 Cargo Road, Orange – Planning Agreement

Section 7.4 of the *Environmental Planning and Assessment Act 1979* (NSW)

Orange City Council

&

Charms Developments Pty Limited and Fenlor Group Pty Limited

&

Celestina Maria Vardanega

277 CARGO ROAD, ORANGE

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277 CARGO ROAD, ORANGE

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277 CARGO ROAD, ORANGE

Date

Parties

Orange City Council ABN 85 985 402 386 of 135 Byng Street, Orange, NSW (**Council**)

Charms Developments Pty Limited (**ACN 147 580 149**) of 171 Margaret Street, Orange, NSW and **Fenlor Group Pty Limited** (**ACN 93 072 632 430**) of 1 Borrodell Drive, Orange, NSW (**Developers**).

Celestina Maria Vardanega of 277 Cargo Road, Orange NSW **(Owner)**

Recitals

A The Developers have a right to purchase the Land from the Owner.

B The Developers propose to carry out the Development which requires the Land to be rezoned. The Instrument Change must come into force for the Development to be undertaken.

C If the Instrument Change comes into force, the Developers intend to lodge one or more development applications for the Development.

D The Instrument Change application was accompanied by an offer by the Developers to enter into this Deed to make contributions for public purposes associated with the Instrument Change and the Development.

The Parties agree, in consideration of, among other things, the mutual promises contained in this Deed as follows:

1 Definitions and interpretation

1.1 Definitions

In this Deed the following definitions apply:

Act means the *Environmental Planning and Assessment Act 1979* (NSW).

Approval includes approval, consent, licence, permission or the like.

Authority means the Commonwealth or New South Wales government, a Minister of the Crown, a government department, a public authority established by or under any Act, a council or county council constituted under the *Local Government Act 1993* (NSW), or a person or body exercising functions under any Act including a commission, panel, court, tribunal, and the like.

Business Day means any day except for Saturday or Sunday or a day which is a public holiday in NSW.

Certificate of Practical Completion means a certificate issued by Council to the Developers to the effect that, in the reasonable opinion of Council, the Works have reached Practical Completion.

Claims means any claim, loss, liability, damage, proceeding, order, judgment or expense arising out of the operation of this Deed.

Contributions means the contributions referred to in the Contribution Schedule.

Contribution Schedule means Schedule 2 to this Deed.

Dedication Land means the Open Space Land dedicated under this Deed.

Deed means this document and includes all Schedules, annexures and other documents attached, or referred to, in it.

Determination Notice has the meaning given to that term in clause 9.4.

Development means the:

(a) subdivision of the Land into up to 103 lots (containing up to 102 urban residential lots and 1 open space lot);

(b) the open space lot will be a public park / reserve available to the public for recreation;

(c) construction and installation of works and services for the residential lots and public open space.

Development Consent has the same meaning as in the Act.

Dispute means a dispute or difference between the Parties under or in relation to this Deed described in a Notice of Dispute.

Encumbrance means any security interest or other proprietary interest in the Vendor's Property including but not limited to a lease, mortgage, charge or caveatable interest.

GST means the same as in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

GST Law means the same as in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

Instrument Change means the amendment to the LEP pursuant to the Planning Proposal.

Land means the land comprised in Lot A DP401482 known as 277 Cargo Road, Orange.

LEP means *Orange Local Environmental Plan 2011*.

Maintenance Period is the period of 2 years from the later of:

(a) the date of the Certificate of Practical Completion; and

(b) the date on which the Council becomes the owner of the Dedication Land pursuant to dedication under clause 6.1(a) or otherwise.

Maintenance Works means soft landscaping works including mowing grass, trimming edges, pruning trees and shrubs, and any other works reasonably required by Council to bring, or keep, the Dedication Land (and any item within or otherwise forming part of the

Dedication Land and improvement to it) in good condition and otherwise in a condition that satisfies the Standards.

Open Space Land means that part of the Land:

(a) identified in the Planning Proposal as proposed for dedication as a park;

(b) with an area and configuration otherwise acceptable to the Council; and

(c) not otherwise the subject of a proposed dedication under any contributions plan under section 7.18 of the Act.

Party means a party to this Deed (including their assigns and a person bound by the Deed under section 7.6(3) of the Act), and Parties means all of them.

Planning Proposal means the planning proposal within the meaning of section 3.33 of the Act, proposing an amendment to the LEP commencing no earlier than 21 March 2025 to:

(a) rezone the Land from the existing zoning (part C3 – Environmental Management and part RU1 – Primary Production) to part Zone R1 General Residential, and part Zone R2 Low Density Residential.

(b) vary the minimum lot size applicable to the Land; and

(c) to modify the terrestrial biodiversity mapping over the Land.

Practical Completion with respect to Works, means that stage in the execution of the Works when:

(a) the Works have been carried out in accordance with this Deed and are complete except for minor defects;

(b) any temporary works (including scaffolding, site sheds and covered walkways) have been removed from the Open Space Land;

(c) all rubbish, debris and surplus building material has been removed from the Open Space Land; and

(d) all water points for irrigation have been connected and installed on the Open Space Land,

except for minor omissions and defects:

(e) which do not prevent the Works from being reasonably capable of being used for their intended purpose; and

(f) the rectification of which will not prejudice the convenient use of the Works.

Register means the Torrens title register maintained under the *Real Property Act 1900* (NSW).

Regulation means the *Environmental Planning and Assessment Regulation 2021*.

Schedule means a schedule to this Deed.

Standards means the scope of services for the maintenance of the public open space set out in *Scope of Services - Orange City Council Request for Tender F3980 - Maintenance of Public Open Space,*

Works means construction and embellishment of the Open Space Land as a public park for public recreation in accordance with the Works Schedule.

Works Schedule means Schedule 3 to this Deed.

1.2 Interpretation

In the interpretation of this Deed, the following provisions apply unless the context otherwise requires:

(a) except as otherwise provided in this Deed, words in this Deed have the same meaning as those words have in the Act;

(b) a heading is for convenience only and does not affect the interpretation of this Deed;

(c) a reference to a business day means a day other than a Saturday or Sunday on which banks are open generally for business in New South Wales;

(d) If the day on which any act, matter or thing is to be done under this Deed is a not a Business Day, the act, matter or thing must be done on the next Business Day.

(e) a reference in this Deed to any law, legislation or legislative provision includes any statutory modification, amendment or re-enactment, and any subordinate legislation or regulations issued under that legislation or legislative provision;

(f) a reference in this Deed to any agreement, deed or document is to that agreement, deed or document as amended, novated, supplemented or replaced;

(g) a reference to a clause, part, annexure or Schedule is a reference to a clause, part, annexure or Schedule to this Deed;

(h) an expression importing a natural person includes any company, trust, partnership, joint venture, association, body corporate or Authority;

(i) grammatical forms of defined words or phrases have corresponding meanings;

(j) a word which denotes the singular denotes the plural, and a word which denotes the plural denotes the singular;

(k) references to the word ‘include’ or ‘including’ are to be construed without limitation;

(l) a reference to a Party to this Deed includes a reference to the servants, agents and contractors of the Party, the Party’ successors and assigns;

(m) references to a Party are intended to bind their executors, administrators and permitted transferees;

(n) any annexures or Schedules form part of this Deed;

(o) a reference to a period unless specifically written otherwise, excludes the first day of that period;

(p) a reference to a notice, consent, request, approval or other communication under this Deed or an agreement between the Parties means a written notice, request, consent, approval or agreement.

2 Status of this Deed

(a) The parties agree that this Deed is a planning agreement within the meaning of section 7.4(1) of the Act.

(b) Schedule 1 summarises the requirements for planning agreements under section 93F of the Act and the way this Deed addresses those requirements.

3 Application of this Deed

This Deed applies to:

(a) the Instrument Change;

(b) the Land; and

(c) the Development.

4 Commencement of this Deed

4.1 Ownership of Land

The Parties acknowledge and agree that as at the date of this Deed the Developers have provided evidence to satisfy the Council that

(a) the Developers are the registered proprietors of the Land; or

(b) if the Developers are not the registered proprietors of the Land, they have entered a legally binding agreement with the Owner to take ownership of the Land with settlement to occur on or before 28 February 2025.

4.2 Commencement of Deed

(a) This Deed commences and has force and effect on, and from, the date that all Parties have signed this Deed.

(b) Despite anything else contained in this Deed:

(i) the obligation of the Developers or the Owner (as the case may be), to provide the Contributions does not take effect until the Instrument Change comes into force; and

(ii) the obligations of the Owner are limited to matters concerning or affecting dedication, of freehold transfer, of the Open Spece Land.

5 Application of sections 7.11, 7.12 and 7.24 of the Act

(a) This Deed does not exclude the application of section 7.11, 7.12 or 7.24 of the Act to the Development.

(b) Benefits under this Deed are to be taken into consideration in determining a development contribution under section 7.11 of the Act.

6 Contribution - Dedication of the Open Space Land

6.1 Dedication

(a) If:

(i) the Instrument Change takes effect; and

(ii) a Development Consent is granted for the Development;

the Developers must procure (and the Owner must permit) dedication, or freehold transfer, to the Council of the Open Space Land (at no cost to the Council) in accordance with the Contribution Schedule and any other provision of this Deed relating to the dedication, or freehold transfer, of the Open Space Land.

(b) The Developers must (at their cost) obtain all Approvals required and do all things necessary to subdivide the Land so as to create separate freehold lots including the Open Space Land.

(c) The Developers must ensure (and the Owner must permit) the dedication, or freehold transfer, of the Open Space Land to the Council free of any trusts, estates, interests, covenants and Encumbrances excluding those otherwise agreed in writing by the Council or required by the Council under any condition of any Development Consent for the Development.

(d) The Developers must pay all costs associated with the dedication, or freehold transfer, of land of the Open Space Land under this clause 6.1.

(e) The Developers and the Owner's obligations under this clause 6.1 will have been satisfied when:

(i) the Open Space Land is dedicated to the Council as a public open space by operation of the registration of a plan of the subdivision in accordance with section 49 of the *Local Government Act 1993* (NSW); and

(ii) an eCT is issued by NSW Land Registry Services for the whole of the Open Space Land identifying the Council as the registered proprietor of this land.

6.2 Purpose

The Parties acknowledge and agree that the dedication of the Open Space Land will serve the public purposes set out in the Contribution Schedule.

7 Carrying out the Works

7.1 Works

(a) If:

(i) the Instrument Change takes effect; and

(ii) a Development Consent is granted for the Development;

the Developers must procure (and the Owner must permit) the carrying out the Works in accordance with the Contributions Schedule, the Works Schedule and any other provision of this Deed relating to the Works.

(b) To the extent of any inconsistency, the conditions of any Development Consent for the Works will prevail over any requirements under this Deed relating to the Works.

(c) Nothing in this clause 7.1 prevents or restricts the Council from taking any enforcement action in relation to:

(i) any obligation of the Developers or the Owner under this Deed; or

(ii) any associated liability, loss, cost, charge or expense directly or indirectly incurred by the Council because of the failure by the Developers or the owner (as the case may be) to comply with this Deed,

(d) The Works required under this Deed will be taken to have reached Practical Completion for the purposes of this Deed when a Certificate of Practical Completion has been issued for those Works.

(e) The Works must reach Practical Completion prior to the dedication, or freehold transfer of the Open Space Land.

(f) The Developer may:

(i) carry out the Works itself; or

(ii) enter into an agreement with another person, approved by the Council, acting reasonably, under which the other person carries out the Works on the Developer's behalf.

7.2 Purpose

The Parties acknowledge and agree that the carrying out of the Works will serve the public purposes set out in the Contributions Schedule.

8 Maintenance

8.1 Maintenance

(a) The Dedication Land must be maintained by the Developers to the reasonable satisfaction of the Council for the Maintenance Period in accordance with the Standards.

(b) The Developers must comply with, or satisfy, all relevant Council policies and obtain all Approvals necessary to carry out the Maintenance Works required under this clause 8.1.

(c) The Council agrees that the Developers may:

(i) carry out the Maintenance Works itself; or

(ii) enter into an agreement with another person, approved by the Council, under which the other person carries out the Maintenance Works on the Developers behalf.

(d) 40 Business Days prior to the end of any Maintenance Period, the Developers must request Council to carry out an inspection of the Dedication Land.

(e) The Council must carry out the inspection as requested by the Developers within 5 Business Days of the request.

(f) If, following the inspection carried out by the Council under clause 8.1(e):

(i) the Council determines (acting reasonably) that the Developers have failed to substantially comply with the Standards;

(ii) the Council issues a written notice to the Developers identifying the manner in which the Council considers that the Developers have failed to substantially comply with the Standards; and

(iii) the Developers do not rectify that failure within 21 Business Days of being notified of that failure or within a reasonable period of time agreed between the Parties,

then the Council may extend the Maintenance Period for a period reasonably necessary to enable the Developers to achieve substantial compliance with the Standards and, if deemed necessary by the Council acting reasonably, by itself, its employees, contractors or agents, carry out the required works and may recover as a debt due to the Council by the Developer in a Court of competent jurisdiction the amount of the costs incurred by the Council in carrying out the Maintenance Works.

8.2 Access licence

(a) The Council authorises the Developers (including any servant, agent or contractor), to enter upon the Dedication Land with all necessary materials and appliances necessary for the purpose of carrying out the Maintenance Works in accordance with this clause 8.2.

(b) Nothing in this Deed creates or gives the Developers any estate or interest in he Dedicated Land.

(c) Prior to entering upon the Dedication Land, the Developers must give the Council not less than 3 Business Days' notice in writing, setting out:

(i) the period during which the Developers (including any servant, agent or contractor) will enter, and remain, upon the Dedicated Land; and

(ii) that part of the Dedication Land the Developers (including any servant, agent or contractor) will enter, and remain, upon.

(d) The Developers (including any servant, agent or contractor) must when on the Dedication Land comply with:

(i) all reasonable directions and requirements that may be given by the Council; and

(ii) all laws relevant to the conduct of the Maintenance Works upon the Dedicated Land.

(e) The Developers release the Council from all Claims of every description which the Council suffers or incurs in connection with, or arising from, the Maintenance Works carried out by the Developers, except to the extent that any such Claim is caused, or contributed to, directly or indirectly as a result of the Council or its employees, officers, agents, contractors or workmen's negligence, default, act or omission.

(f) The Developers indemnify, and hold indemnified, the Council from and against all Claims of every description which the Council suffers or incurs in connection with, or arising from, the Maintenance Works carried out by the Developers, except to the extent that any such Claim is caused, or contributed to, directly or indirectly as a result of the Council or its employees, officers, agents, contractors or workmen's negligence, default, act or omission.

(g) For so long as the Developers (including any servant, agent or contractor) is carrying out the Maintenance Works, the Developers must obtain, and maintain current, a public risk insurance policy containing terms that are commonly used by reputable insurers in New South Wales for the amount of $20,000,000 in respect of any single event or accident or for such higher amount as the Council (acting reasonably) may require at any time. No later than 10 Business Days after any request by the Council, the Developers must provide to the Council a certificate of currency in respect of any insurance that must be established and maintained under this Deed.

8.3 Purpose

The Parties acknowledge and agree that the Maintenance Works will serve the public purposes set out in the Contributions Schedule.

9 Dispute Resolution - Parties to negotiate

9.1 Reference to Dispute

If a dispute arises between the Parties in relation to this Deed, the Parties must not commence any court proceedings relating to the dispute unless the Parties have complied with this clause 9, except where a Party seeks urgent interlocutory relief.

9.2 Notice of Dispute

The Party wishing to commence the dispute resolution process must give notice (**Notice of Dispute**) to the other Parties of:

(a) the nature of the Dispute,

(b) the alleged basis of the Dispute, and

(c) the position which the Party issuing the Notice of Dispute believes is correct.

9.3 Representatives of Parties to meet

(a) The representatives of the Parties must promptly (and in any event within 20 Business Days of the Notice of Dispute) meet in good faith to attempt to resolve the notified Dispute.

(b) The Parties may, without limitation:

(i) resolve the Dispute during the course of that meeting,

(ii) agree that further material or expert determination in accordance with clause 10 about a particular issue or consideration is needed to effectively resolve the Dispute (in which event the Parties will, in good faith, agree to a timetable for resolution); or

(iii) agree that the Parties are unlikely to resolve the Dispute and, in good faith, agree to a form of alternative dispute resolution (which may include expert determination, arbitration or mediation in accordance with clause 11) which is appropriate for the resolution of the relevant Dispute.

9.4 Notice if dispute is not resolved

If the Dispute is not resolved within 10 Business Days after the nominated representatives have met or by another time agreed by the Parties in accordance with clause 9.3(b), either Party may give to the other a notice calling for determination of the Dispute (**Determination Notice**) by mediation under clause 11 or by expert determination under clause 10.

10 Dispute resolution – expert determination

10.1 Expert determination to apply

(a) If the Dispute is not resolved under clause 9.3 or clause 11, or the Parties otherwise agree that the Dispute may be resolved by expert determination, the Parties may refer the Dispute to an expert, in which event this clause 10 applies.

(b) The Dispute that can be determined by an appropriately qualified and independent expert in the relevant field:

(i) agreed upon and appointed jointly by the Parties; or

(ii) if no agreement is reached or no appointment is made within 20 Business Days of the agreement to refer the Dispute to an expert, appointed on application of a Party by the President of the Law Society of New South Wales.

10.2 Expert appointment

The expert must be appointed in writing and the terms of the appointment must not be inconsistent with this clause 10.

10.3 Expert determination

(a) The determination of the Dispute by such an expert will be made as an expert and not as an arbitrator and will be in writing and contain the reasons for the determination.

(b) The expert will determine the rules for the conduct of the process but must conduct the process in accordance with the rules of natural justice.

(c) Any determination made by an expert pursuant to this clause 10 is final and binding upon the parties unless:

(i) in the case of fraud, misfeasance by the expert, or error of law; or

(ii) within 20 Business Days of receiving the determination, a Party gives written notice to the other Party that it does not agree with the determination and commences litigation; or

(iii) the determination is in respect of, or relates to, termination or purported termination of this Deed by any Party, in which event the expert is deemed to be giving a non-binding appraisal.

10.4 Costs

Each Party is to bear its own costs arising from or in connection with the appointment of the expert and the expert determination.

10.5 Litigation

If the Dispute is not finally resolved in accordance with this clause 10 then a Party is at liberty to litigate the Dispute.

10.6 No suspension of contractual obligations

Subject to any interlocutory order obtained under clause 10.5, the referral to or undertaking of a dispute resolution process under this clause 10 does not suspend the Parties' obligations under this Deed.

11 Dispute Resolution - Mediation

11.1 Mediation to apply

If a Party gives a Determination Notice calling for the Dispute to be mediated:

(a) the Parties must agree to the terms of reference of the mediation within 15 Business Days of the receipt of the Determination Notice (the terms shall include a requirement that the mediation rules of the Institute of Arbitrators and Mediators Australia (NSW Chapter) apply); and

(b) the mediator will be agreed between the Parties, or failing agreement within 15 Business Days of receipt of the Determination Notice, either Party may request the President of the Institute of Arbitrators and Mediators Australia (NSW Chapter) to appoint a mediator.

11.2 Mediator appointment

The mediator appointed pursuant to this clause 11 must:

(a) have reasonable qualifications and practical experience in the area of the Dispute; and

(b) have no interest or duty which conflicts or may conflict with his or her function as a mediator he or she being required to fully disclose any such interest or duty before his or her appointment.

11.3 Confidentiality

The mediator shall be required to undertake to keep confidential all matters coming to his or her knowledge by reason of his or her appointment and performance of his or her duties.

11.4 Appoint representatives

The Parties must within 15 Business Days of receipt of the Determination Notice notify each other of their representatives who will be involved in the mediation.

11.5 Costs

Each Party is to bear its own costs arising from or in connection with the appointment of a mediator and the mediation.

12 Registration of this Deed

12.1 Registration

(a) The Developers agree to procure registration of this Deed under the *Real Property Act 1900* (NSW) in the relevant folios of the Register of the Land in accordance with section 7.6(1) of the Act.

(b) The Developers (at their own expense), must:

(i) procure the lodgement of this Deed with the Registrar-General as soon as reasonably practicable after this Deed comes into operation, but in any event, no later than 21 Business Days after that date;

(ii) procure the registration of this Deed by the Registrar-General in the relevant folio(s) of the Register for the Land as soon as reasonably practicable after this Deed is lodged for registration; and

(iii) provide documentary evidence that the registration of this Deed has been completed to the Council within 5 Business Days of receiving confirmation that the registration has occurred.

(c) The Developers (at its own expense) will take all practical steps, and otherwise do anything that the Council reasonably requires to procure:

(i) the consent of each person who:

(A) has an estate or interest in the Land registered under the *Real Property Act 1900* (NSW); or

(B) is seized or possessed of an estate or interest in the Land;

(ii) an acceptance of the terms of this Deed and an acknowledgement in writing from any existing mortgagee in relation to the Land that the mortgagee will adhere to the provisions of this Deed if it takes possession of the Land as mortgagee in possession;

(iii)the execution of any documents; and

(iv) making available the title to the Land for registration purposes,

to enable the registration of this agreement in accordance with this clause 12.1 .

(d) The Owner consents to the registration of the Deed in accordance with this clause 12.1.

12.2 Removal from register

(a) The Parties agree that the registration of the Deed will be removed from the folio(s) of the Register for the Land (or any part of it) if:

(i) the Instrument Change does not occur; or

(ii) the Council, acting reasonably, is satisfied that the Owner has fulfilled their obligations under this Deed and are not otherwise in default of their obligations under this Deed.

(b) The Council is to do such things as are reasonably necessary as requested by an Owner to facilitate removal from the folio(s) of the Register for the Land (or any part of it).

12.3 Notation

The Developers acknowledge and agree that the Council may, in its absolute discretion, make a notation under section 10.7(5) of the Act about this Deed on any certificate issued under section10.7(2) of the Act relating to any lot on which this Deed is required to be registered under this Deed.

12.4 Caveat

(a) The Developers and the Owner acknowledge and agree that:

(i) when this Deed comes into force, the Council is deemed to have acquired and the Developers or the Owner (as the case may be) are deemed to have granted, an equitable estate and interest in the Land for the purposes of section 74F(1) of the *Real Property Act 1900 (NSW)* and consequently the Council will have a sufficient interest in the Land in respect of which to lodge a caveat over the Land notifying that interest;

(ii) they will not object to the Council lodging a caveat in the relevant folio(s) of the Register for the Land nor will it seek to remove any caveat lodged by the Council provided the caveat does not prevent registration of any dealing or plan other than a transfer.

(b) The Council must, at the Developers cost, register a withdrawal of any caveat in respect of the Land within reasonable time after the Developers comply with clause 12.1.

13 Review of this Deed

13.1 Review by agreement

(a) The Parties agree that this Deed may be reviewed or modified by agreement between them.

(b) No modification or review of this Deed will be of any force or effect unless it is in writing, exhibited in accordance with the Regulation and signed by the Parties.

(c) Any review or modification of this agreement under this clause 13 will be conducted in the circumstances and in the manner determined by the Parties.

13.2 Notice

(a) The Parties agree that this Deed may be reviewed or modified by agreement between them if:

(i) the Developers notify the Council or the Council notifies the Developers that any change of circumstance has occurred, or is imminent, that materially affects the operation of this Deed; or

(ii) the Council notifies the Developers that it considers that circumstances exist that justify the review.

(b) For the purposes of this this clause 13, the relevant changes include (but are not limited to) any change to a law that restricts or prohibits or enables the Council or any other planning authority to restrict or prohibit any aspect of the Development.

(c) For the purposes of addressing any matter arising from a review of this Deed referred to in this clause 13, the Parties are to use all reasonable endeavours to agree on and implement appropriate amendments to this Deed.

13.3 Illegality

If this Deed becomes illegal, unenforceable or invalid as a result of any change to a law, the Parties agree to do all things necessary to ensure that an enforceable agreement of the same or similar effect to this Deed is entered into.

13.4 No breach

A failure by a Party to agree to take action requested by the other Party as a consequence of a review referred to in clause 13.1 is not a Dispute for the purposes of clauses 9, 10 or 11 and is not a breach of this Deed.

13.5 Further agreements

The Parties may, at any time and from time to time, enter into agreements relating to the subject matter of this Deed that are not inconsistent with this Deed for the purpose of implementing this Deed.

14 Enforcement in a court of competent jurisdiction

14.1 Enforcement

(a) Without limiting any other provision of this Deed, the Parties may enforce this Deed in any court of competent jurisdiction.

(b) For the avoidance of doubt, nothing in this Deed prevents:

(i) a Party from bringing proceedings in the Land and Environment Court to enforce any aspect of this Deed or any matter to which this Deed relates,

(ii) the Council from exercising any function under the Act or any other Act or law relating to the enforcement of any aspect of this Deed or any matter to which this Deed relates.

14.2 Default

(a) If a Party considers another Party has failed to perform and fulfil an obligation under this Deed, it may give notice in writing to the other Party (**Default Notice**) giving all particulars of the matters in respect of which it considers default has occurred and by such notice require the default to be remedied within a reasonable time, not being less than 10 Business Days.

(b) In determining a reasonable time, regard must be had to both the nature of the default and the work or other action required to remedy it and whether the continuation of the default constitutes a public nuisance or raises other circumstances of urgency or emergency.

(c) If a party disputes the Default Notice, it may refer the dispute to the dispute resolution under clauses 9, 10 or 11 of this Deed.

(d) If the Developers or the Owner (as the case may be) fails to comply with a Default Notice, the Council may perform the obligations the Developers or the Owner (as the case may be) have failed to fulfil in accordance with the Default Notice and do anything which the Developers or the Owner (as the case may be) should have done under this Deed in relation to their obligations the subject of the Default Notice.

(e) Without limiting clause 14.2(d)(d), the Developers and the Owner agree that the Council, its employees, agents and contractors, may when exercising its rights under that clause, decide (acting reasonably) to enter onto the Land and do whatever is necessary to remedy the default.

(f) For so long as the Council (including any servant, agent or contractor) is carrying out Works in purported exercise of its rights under clause 14.2(e) above, the Council must obtain, and maintain current, a public risk insurance policy containing terms that are commonly used by reputable insurers in New South Wales for the amount of $20,000,000 in respect of any single event or accident.

(g) The Developers indemnify, and keep indemnified, the Council against all Claims made against the Council as a result of the exercise or purported exercise of the rights of the Council under this clause 14.2 except to the extent such Claim arises either directly or indirectly as a result of the Council or its employees, officers, agents, contractors or workmen's negligence, default, act or omission.

14.3 Compulsory Acquisition

(a) If the Developers do not procure dedication or transfer, or the Owner does not dedicate or transfer, the Open Space Land to the Council as required by this Deed, the Council may compulsorily acquire the relevant land, in which case the Developer consents to the Council compulsorily acquiring that land for compensation in the amount of $1.00 without having to follow the pre-acquisition procedures in the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW)*.

(b) Clause (a) constitutes an agreement for the purposes of section 30 of the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW)*.

(c) Except as otherwise agreed between the Parties, the Developers and the Owner (as the case may be) must ensure the Open Space Land is freed and discharged from all estates, interests, trusts, restrictions, dedications, reservations, rights, charges, rates, strata levies and any other Encumbrance, except as may be permitted by this Deed on the date that the Council will acquire the Open Space Land in accordance with clause (a).`

(d) The Developers indemnify, and keep indemnified, the Council against all Claims made against the Council as a result of any acquisition by the Council of the Open Space Land under clause (a).

(e) The Developers must pay the Council, promptly on demand, an amount equivalent to all costs, including legal costs, reasonably incurred by the Council acquiring the Open Space Land under clause (a).

15 Assignment and dealings

15.1 Assignment

(a) A Party must not assign or deal with any right under this Deed without the prior consent of the other Parties, such consent not to be unreasonably withheld.

(b) Any change of ownership or control (as defined in section 50AA of the *Corporations Act 2001 (*Cth*)*) of the Developers (excluding the Council) shall be deemed to be an assignment of this Deed for the purposes of this clause 15.1.

(c) Any purported dealing in breach of this clause 15.1 is of no effect.

15.2 Transfer of Land

The Developers and the Owner, if the Developers are not the registered proprietors of the Land may not transfer, assign or dispose of the whole or any part of its right, title or interest in the Land (present or future) or in the Development to another person (**Transferee**) unless before it sells, transfers or disposes of that right, title or interest:

(a) the Developers (and the Owner if applicable) satisfy the Council that the proposed Transferee is financially capable of complying with the Developers' obligations under this Deed;

(b) the Developers (and the Owner if applicable) satisfy the Council that the rights of the Council will not be diminished or fettered in any way;

(c) (c)the Transferee delivers to the Council a novation deed signed by the Transferee in a form and of such substance as is acceptable to the Council containing provisions under which the Transferee agrees to comply with all the outstanding obligations of the Developers (and the Owner if applicable) under this Deed;

(d) any default under this Deed has been remedied or waived by the Council, on such conditions as the Council may determine, and

(e) the Developers and the Transferee pay the Council's reasonable costs in relation to the assignment.

16 Costs and GST

16.1 Costs

(a) Each Party must pay their own legal costs in connection with the negotiation, preparation and signature of this Deed.

(b) The Developers must pay the Council's legal costs and disbursements (on a solicitor client basis) in connection with the carrying into effect, enforcement and release and discharge of this Deed, no later than 21 Business Days after receiving a demand from the Council to pay such costs.

(c) The Developers must pay or reimburse the Council for the costs and expenses incurred by Council in connection with the advertising and exhibition of this Deed in accordance with the Act, no later than 21 Business Days after receiving a demand from the Council to pay such costs

(d) The Developers must pay the Council any administrative fees as required by Council, acting reasonably, in connection with the administration of this Deed, no later than 21 Business Days after receiving a demand from the Council to pay such costs

16.2 Duty

The Developers must pay any duty in respect of the Deed.

16.3 GST

(a) Words and expressions which are not defined in this Deed, but which have a defined meaning in GST Law have the same meaning as in the GST Law.

(b) Unless otherwise expressly stated, all prices or other sums payable or consideration to be provided under this Deed are exclusive of GST.

(c) If GST is imposed on any supply made under or in accordance with this Deed, the Developers must pay the GST or pay to the Council an amount equal to the GST payable on or for the taxable supply, whichever is appropriate in the circumstances.

(d) If the Council is obliged to pay any GST on any supply made under or in accordance with this Deed, the Developers indemnify the Council for the amount of any such payment is required to make.

17 No fetter

17.1 Discretion

This Deed is not intended to operate to fetter, in any manner, the exercise of any statutory power or discretion of the Council, including, but not limited to, any statutory power or discretion of the Council relating to any application submitted to the Council in its capacity as a public authority (referred to in this Deed as a **Discretion**).

17.2 No fetter

No provision of this Deed is intended to constitute any fetter on the exercise of any discretion. If, contrary to the operation of this clause, any provision of this Deed is held by a court of competent jurisdiction to constitute a fetter on any discretion, the Parties agree:

(a) they will take all practical steps, including the execution of any further documents, to ensure the objective of this clause is substantially satisfied,

(b) in the event that clause (a) cannot be achieved without giving rise to a fetter on the exercise of a discretion, the relevant provision is to be severed and the remainder of this Deed has full force and effect, and

(c) to endeavour to satisfy the common objectives of the Parties in relation to the provision of this Deed which is to be held to be a fetter on the extent that is possible having regard to the relevant court judgment.

17.3 Planning Certificates

The Developers and the Owner acknowledge that the Council may include advice on any planning certificate issued under section 10.7 of the Act that this Deed affects the Land.

18 Representations and warranties

The Parties represent and warrant that they have power to enter into this Deed and comply with their obligations under the Deed and that entry into this Deed will not result in the breach of any law.

19 Notices

19.1 Form

Any notice, consent, information, application or request that must or may be given or made to a Party under this Deed is only given or made if it is in writing and sent in one of the following ways:

(a) delivered or posted to that Party at its address, or

(b) emailed to that Party at its email address.

19.2 Address

Such address or email address is as specified below or the most recently notified by the recipient to the sender under clause 19.3:

Developers	**Charms Developments Pty Limited** (**ACN 147 580 149**) of 171 Margaret Street, Orange, NSW and **Fenlor Group Pty Limited** (**ACN 93 072 632 430**) of 1 Borrodell Drive, Orange, NSW (**Developers**).
Owner	277 Cargo Road, Orange, NSW 2800
Council	135 Byng Street, Orange, NSW 2800

19.3 Change of details

If a Party gives the other Party not less than 2 Business Days' notice of a change of its address or email address, any notice, consent, information, application or request is only given or made by that other Party if it is delivered, posted or faxed to the latest address or email address.

19.4 Deemed service

Any notice, consent, information, application or request is to be treated as given or made if it is:

(a) delivered, when it is left at the relevant address;

(b) sent by post, 6 business days after it is posted; or

(c) sent by email and the sender does not receive a delivery failure message from the sender's internet service provider within a period of 24 hours of the email being sent.

20 General

20.1 Entire Deed

(a) This Deed contains everything to which the Parties have agreed in relation to the matters it deals with.

(b) No Party can rely on an earlier document, or anything said or done by another Party, or by a director, officer, agent or employee of that Party, before this Deed was executed, except as permitted by law.

20.2 Severability

(a) If a clause or part of a clause of this Deed can be read in a way that makes it illegal, unenforceable or invalid, but can also be read in a way that makes it legal, enforceable and valid, it must be read in the latter way.

(b) If any clause or part of a clause is illegal, unenforceable or invalid, that clause or part is to be treated as removed from this Deed, but the rest of this Deed is not affected.

20.3 Invalidity

(a) A word or provision must be read down if:

(i) this Deed is void, voidable, or unenforceable if it is not read down;

(ii) this Deed will not be void, voidable or unenforceable if it is read down; and

(iii) the provision is capable of being read down.

(b) A word or provision must be severed if:

(i) despite the operation of clause (a), the provision is void, voidable or unenforceable if it is not severed; and

(ii) this Deed will be void, voidable or unenforceable if it is not severed.

(c) The remainder of this Deed has full effect even if clause (b) applies.

20.4 Variation

No variation of this Deed will be of any force or effect unless it is in writing and signed by the Parties to this Deed.

20.5 Waiver

(a) The fact that a Party fails to do, or delays in doing, something the Party is entitled to do under this Deed, does not amount to a waiver of any obligation of, or breach of obligation by, another Party.

(b) A waiver by a Party is only effective if it is in writing. A written waiver by a Party is only effective in relation to the particular obligation or breach in respect of which it is given. It is not to be taken as an implied waiver of any other obligation or breach or as an implied waiver of that obligation or breach in relation to any other occasion.

20.6 Joint and several liability

Except as otherwise set out in this Deed, any agreement, covenant, representation or warranty under this Deed by the Developers binds each of them jointly and individually, and any benefit in favour of the Developers for an individual lot is for the benefit of them jointly and each of them individually.

20.7 Further acts

Each Party must promptly execute all documents and do all things that another Party from time to time reasonably requests to effect, perfect or complete this Deed and all transactions incidental to it.

20.8 Counterparts

This Deed may be executed in any number of counterparts. All counterparts taken together constitute one instrument.

20.9 Approvals and consent

(a) Except as otherwise set out in this Deed, and subject to any statutory obligations, a Party may give or withhold an approval or consent to be given under this Deed in that Party's absolute discretion and subject to any conditions determined by the Party.

(b) A Party is not obliged to give its reasons for giving or withholding consent or for giving consent subject to conditions.

20.10 Governing law and jurisdiction

(a) This Deed is governed by the law of New South Wales.

(b) The Parties submit to the non-exclusive jurisdiction of its courts and courts of appeal from them.

The Parties are not to object to the exercise of jurisdiction by those courts on any basis.

20.11 Electronic signature

(a) In this clause 20.11, electronic signature means a digital signature or other visual representation of a person's handwritten signature or mark placed or typed on a copy of this Deed by electronic or mechanical means (including by using DocuSign or other electronic signing platform agreed between the Parties) and electronically signed has a corresponding meaning.

(b) The Parties consent to this Deed being signed by or on behalf of a Party by electronic signature.

(c) Where this Deed is electronically signed by or on behalf of a Party, the Party warrants and agrees that the electronic signature has been used to identify the person signing and to indicate that the Party intends to be bound by this Deed.

(d) Each Party consents to the exchange of counterparts of this Deed by delivery by email to the Party or its legal representative or other electronic means of exchange as the Parties may agree.

(e) On request, each Party must deliver a physical counterpart of this Deed with the handwritten signature or signatures of the Party and any written evidence of the authority of a person signing on their behalf, but a failure to comply with this request will not affect the validity of this Deed.

277 CARGO ROAD, ORANGE

21 Explanatory Note

(a) Schedule 4 contains the Explanatory Note relating to this Deed required by clause 205 of the Regulation.

(b) Pursuant to clause 205(5) of the Regulation, the Parties agree that the Explanatory Note is not to be used to assist in construing this Deed.

277 CARGO ROAD, ORANGE

Schedule 1

Summary of requirements (section 7.4 of the Act)

Subject and subsection of the Act	Planning Agreement
Description of the land to which the planning Agreement applies – Section 7.4(3)(a)	The land comprised in Lot A DP408148 known as 277 Cargo Road, Orange
Description of the change to the environmental planning instrument to which the agreement applies – Section 7.4(3)(b)(i)	• Change the mapping of the Land from existing zones C3 – Environmental Management and RU1- Primary Production to part Zone R1 General Residential, and part Zone R2 Low Density Residential. • Change the mapping of the Land from existing 100 hectare minimum lot size to a range of lot sizes including, but not limited to: 1500 m^2 and areas with no minimum lot size. • Modify the terrestrial biodiversity mapping from the Land.
Description of the application to which the agreement applies – Section 7.4(3)(b)(ii)	Subdivision to create up to 103 lots (containing up to 102 urban residential lots and 1 open space lot)
The nature and extent of the provision to be made by the developer under the agreement, the time or times by which the provision is to be made and the manner by which the provision is to be made – Section 7.4(3)(c)	See clauses 6, 7 and 8; and Schedule 2.
Applicability of section 7.11 of the Act – Section 7.4(3)(d) & (e)	Section 7.11 is not excluded by this agreement. See clause 5 of this Deed.
Applicability of section 7.12 of the Act – Section 7.4(3)(d)	Section 7.12 is not excluded by this agreement. See clause 5 of this Deed.
Applicability of section 7.24 of the Act – Section 7.4(3)(d)	Section 7.24 is not excluded by this agreement. See clause 5 of this Deed.
Whether benefits under the agreement are to be taken into consideration in determining a development contribution under section 7.11 Section 7.4(3)(e)	Yes. See clause 5 of this Deed.

277 CARGO ROAD, ORANGE

Mechanism for dispute resolution – Section 7.4(3)(f)	See clauses 9 - 11 of this Deed.
Enforcement of the Planning Agreement – Section 7.4(3)(g)	See clause 14 of this Deed.
No obligation to grant consent or exercise functions – Section 7.4(9)	See clause 17 of this Deed.

Schedule 2 – Contribution Schedule

Column 1	`Column 2	Column 3	Column 4
Contribution item	**Public Purpose**	**Manner & Extent**	**Timing**
Dedication of the Open Space Land			
Open Space Land	The provision of public amenities (section 7.4(2)(a) of the Act)	Dedication, or a freehold ownership transfer, to the Council of the Open Space Land at no cost to the Council.	At any time prior to or simultaneously with the registration of the last registered lot the subject of the Development.
Carrying out of the Works			
Works on the Open Space Land	The provision of public amenities (section 7.4(2)(a) of the Act)	Carrying out the Works on the Open Space Land	Works to be completed to the Council's reasonable satisfaction on, or before, the date on which the dedication, or freehold ownership transfer, to the Council of the Open Space Land occurs.
Maintenance of the Open Space Land			
Maintenance of the Open Space Land for the Maintenance Period	The provision of public amenities (section 7.4(2)(a) of the Act)	Carrying out works and services necessary for the maintenance of the Open Space Land	Maintenance of the Open Space Land to be carried out during the Maintenance Period

Schedule 3 - Works Schedule

1 Interpretation

For the purposes of this clause 1 of Schedule 3, the defined terms in clause 1.1 of this Deed and the Interpretation principles in clause 1.2 of this Deed will apply and, unless context indicates a contrary intention:

Builder means any entity contracted under the Construction Contract to carry out the Works.

Construction Contract means the contract to carry out the Works (whether or not that is a contract for the Works only or forms part of a contract for the building of other components of the Development).

Defects Liability Period means in respect of each item of building works which together comprise the Works the period of 12 months from the date on which the Certificate of Practical Completion is issued for the Works.

Detailed Design means the final specifications and finishes for the Works prepared in accordance with clause 4.2 of this Schedule 3 and will include the design of the Works, the location for the Works, installation specifications and estimated costs of construction and/or installation.

Services means all water, gas, electricity, television, drainage, sewerage, cable TV, data communications, telecommunications and other services which are required under any Development Consent or an Approval and which are necessary or desirable for the construction or operation of the Development.

Superintendent means the Superintendent appointed under any Construction Contract.

2 Requirements and Approvals

2.1 Construction

This Works Schedule must be read and construed subject to:

(a) any requirements or conditions of any Development Consent;

(b) the requirements of and conditions imposed by all relevant Authorities and all laws relating to the Works.

2.2 Approvals

If the Developers requires any Approvals in order to carry out the obligations under this Deed, then the Developers must obtain all Approvals necessary to carry out the Works at their own cost.

2.3 Approvals

(a) The Developers must ensure that the Works carried out under this Deed are carried out:

(i) in accordance with any Development Consent for the Works, all Approvals and the requirements of all laws, including without limitation, work health and safety legislation; and

(ii) in a good and workmanlike manner and so that they are diligently progressed until completion.

(b) All costs of the Works must be borne by the Developers.

3 Project Management and Contractor Engagement

(a) The Developers are responsible for managing the Works.

(b) The Developers must ensure that any contractor it engages to carry out the Works agrees to carry out the Developers obligations in this Works Schedule as part of any Construction Contract.

4 Design Development and Approvals

4.1 Concept Design

The Council and the Developers will work in consultation with each other to prepare and agree the concept plans for the Works.

4.2 Detailed Design

(a) Prior to Works commencing the Developers must provide a copy of the draft Detailed Design to the Council for approval.

(b) Within 20 Business Days of receiving the Detailed Design, the Council will respond to the Developer with any suggested amendments to the Detailed Design.

(c) The Council and the Developers must work in consultation with each other to prepare and agree the Detailed Design and must both act reasonably and with due expedition in their consultations with each other.

(d) If the Detailed Design is not completed and agreed within 20 Business Days of the Council providing its suggested amendments in accordance with clause 4.2(b) of this Schedule 3, to avoid possible delays to the issue of a Construction Certificate, the Council will, in its sole discretion, be entitled to decide on any outstanding or undecided matter or item relating to areas that are to be accessible to the public, provided that any decision made by Council under this clause:

(i) is consistent with the obligation to carry out the Works in accordance with the agreed scope and specifications and dedicate the Dedication Land under this Deed; and

(ii) is consistent withany Development Consent for the Development; and

(iii) does not materially and adversely affect the Development; and

(iv) is not unreasonable; and

(v) does not add to the scope or cost of the Works (unless agreed by both parties).

(e) Any acceptance by the Council of the Detailed Design under this clause 4 of Schedule 3 is not to be taken as approval of or to any Construction Certificate for the Works.

4.3 Good faith

The Parties must act promptly and in good faith to consult in relation to the Detailed Design.

5 Carrying out of Works

5.1 Communication

The Developer must keep the Council reasonably informed of progress of the Works and provide to Council such information about the Works as the Council reasonably requests.

5.2 Standard of Works

(a) Unless otherwise provided, the Developers shall, and must cause the Builder to, use suitable new materials and proper and tradesman like workmanship when carrying out the Works.

(b) The qualitative standard of the design and finishes for the Works must be no less than those described in the following documents:

(i) any relevant Australian Standard; and

(ii) any relevant design standards or guidelines required to be complied with under the conditions of any Development Consent or any Approval required to carry out the Works.

(c) The Developers will obtain any relevant standards (including design standards), specifications, or guidelines and any other requirements or policies referred to in clause 5.2(b) of this Schedule 3 from the Council if the Council fails to deliver them to the Developers.

(d) The Developers may but is not obliged to reinstate any Works where damage or destruction is as a result of:

(i) any act or omission of the Council or its employees, consultants or agents relating to any part of the Works under this Deed; or

(ii) the use or occupation by the Council or its employees, consultants or agents, Council's representatives or other contractor of the Council of any part of the Works.

5.3 Damage to people, property & utilities

(a) The Developers are to ensure to the fullest extent reasonably practicable that, in performing its obligations under this Deed:

(i) all necessary measures are taken to protect people and property;

(ii) unnecessary interference with the passage of people and vehicles is avoided; and

(iii) nuisances and unreasonable noise and disturbances are prevented.

(b) Without limiting clause 5.3(a) of this Schedule 3, the Developers are not to obstruct, interfere with, impair or damage any public road, public footpath, public cycleway or other public thoroughfare, or any pipe, conduit, drain, watercourse or other public utility or service on any land except as authorised in writing by the Council or any relevant Authority.

6 Inspection

(a) Prior to the commencement of the Works, the Council may at its absolute discretion provide a schedule of inspections to be undertaken by Council (**Inspection Schedule**) to occur at specified stages of the construction of the Works (**Inspection Stage**). If the Council does not provide the Inspection Schedule, the Developers must request confirmation from Council as to whether it intends to provide an Inspection Schedule from the Council prior to the Works commencing.

(b) 5 Business Days prior to reaching an Inspection Stage as set out in any Inspection Schedule, the Developers must notify the Council of the proposed inspection date (**Inspection Date**).

(c) On the Inspection Date, or other agreed date, the Developers must ensure that any employees, contractors, agents or representatives of Council have access to and may enter the Land to inspect the Works.

(d) In addition to carrying out inspections in accordance with the Inspection Schedule, the Council may enter the Land or any part of the Land on which the Works are located to inspect the progress of the Works, subject to:

(i) the terms of the Construction Contract (save for any clause of the Construction Contract which prevents the Council from accessing the Land);

(ii) giving reasonable notice to the Developers;

(iii) complying with all reasonable directions of the Developers; and

(iv) being accompanied by the Developers or a nominee, or as otherwise agreed.

(e) The Council may, acting reasonably, within 5 Business Days of carrying out an inspection (either under clause 6(c) or 6(d) of this Schedule 3 , notify the Developers of any defect or non-compliance in the Works and direct the Developer

to carry out work to rectify that defect or non-compliance within a reasonable period of time. Such work may include, but is not limited to:

(i) removal of defective or non-complying material;

(ii) demolishing defective or non-complying work;

(iii) reconstructing, replacing or correcting any defective or non-complying work; and

(iv) not delivering any defective or non-complying material to the site of the Works.

(f) If the Developers are issued a direction to carry out further work under clause 6(e) of this Schedule 3, the Developers must, at its cost, rectify the defect or non-compliance specified in the notice within the time period specified in the notice, provided that it is reasonable having regard to the nature of the works.

(g) If the Developers fail to comply with a direction to carry out work given under 6(e) of this Schedule 3, the Council will be entitled to refuse to accept that the Works (or the relevant part of the Works) meet the Council's standards and specifications and may refuse to issue a Certificate of Practical Completion, until the required Works have been completed to the Council's satisfaction, acting reasonably.

(h) For the avoidance of doubt, any acceptance by the Council that the Developers have rectified a defect or non-compliance identified in a notice issued under 6(e) of this Schedule 3 does not constitute:

(i) acceptance by the Council that the Works comply with all Approvals and laws; or

(ii) an Approval by the Council in respect of the Works; or

(iii) an acknowledgment by the Council that the Works or the relevant part of the Works are complete and may be delivered to the Council in accordance with this Deed.

7 Completion

7.1 Practical Completion

(a) When the Developers considers that the Works, or any part of the Works, are complete, the Developers must send a notice to the Council accompanied by complete works as executed plans, any relevant certificates or consents of any public utility authority and a request for written certification from the Council that the Works are complete (**Completion Notice).**

(b) Within 10 Business Days of receipt of the Completion Notice, the Council will carry out an inspection of the Works and will, acting reasonably, either:

(i) provide written certification to the Developers that the Works have been completed; or

(ii) notify the Developers of any additional information required or matters which must be addressed by the Developers prior to the certification being issued.

(c) If the Developers are required to provide additional information or address any matters under clause 7.1(b)(ii) of this Schedule 3, the Developers will provide that information to Council or address those matters within 10 Business Days of receiving the notice or within a reasonable period of time and make a further request under clause 7.1(a) of this Schedule 3 for written certification that the Works have been completed.

(d) Practical Completion will be achieved in relation to the Works or any part of the Works when a Certificate of Practical Completion has been issued for those Works.

7.2 Delivery of documents

(a) If requested by Council, acting reasonably, prior to issue of the Certificate of Practical Completion, the Developers must deliver to Council complete and legible copies of:

(i) all “as built” full-sized drawings, specifications and relevant operation and service manuals;

(ii) all necessary certificates required under any Development Consent including the certificates of any consultants of the Developers that the Council may reasonably require, and Approvals of any public utility authority (where relevant); and

(iii) copies of all Approvals required for use of the land subject to the Works.

(b) If requested by Council, acting reasonably, prior to the issue of the Certificate of Practical Completion, the Developers must provide the Council with a tour of the land subject to the Works and provide reasonable instructions on the operation and use of the services on that land.

7.3 Assignment of Warranties and Causes of Action

(a) The Developers must assign (as beneficial owner) or cause to be assigned to Council the benefit of any warranties and guarantees obtained by the Developers and the Builder (and capable of assignment) with respect to any material or goods incorporated in or forming part of the Works.

(b) To the extent that any such warranties or guarantees cannot be assigned, the Developer must at the request of Council do anything reasonably required by Council to enforce such warranties or guarantees for the benefit of Council, provided any legal costs of such enforcement are paid for by Council.

7.4 Defects Liability Period

(a) During the Defects Liability Period, the Council (acting reasonably) may give to the Developer a notice (**Rectification Notice**) in writing that identifies a defect in the Works and specifies:

(i) action required to be undertaken by the Developers to rectify that defect (**Rectification Works**); and

(ii) the date on which the defect must be rectified (**Rectification Date**).

(b) The Developers must comply with the Rectification Notice by:

(i) procuring the performance of the Rectification Works by the Rectification Date, or such other date as agreed between the parties;

(ii) keeping the Council reasonably informed of the action to be taken to rectify the defect; and

(iii) carrying out the Rectification Works.

(c) The Council must give the Developers and its contractors any access required to carry out the Rectification Works.

(d) When the Developers consider that the Rectification Works are complete, either the Developers must notify the Council and provide documentation, plans or invoices which establish that the Rectification Works were carried out.

(e) The Council may inspect the Rectification Works within 15 Business Days of receiving a Notice from the Developers under clause 7.4(d) of this Schedule 3 and, acting reasonably:

(i) issue a further Rectification Notice if it is not reasonably satisfied that the Rectification Works are complete; or

(ii) notify the Developer in writing that it is satisfied the Rectification Works are complete.

(f) The Developers must meet all costs of and incidental to rectification of defects under this clause 7.4.

(g) If the Developers fail to comply with a Rectification Notice, then the Council may do such things or take such action as is necessary to carry out the Rectification Works, including accessing and occupying any part of the Dedication Land without further notice to the Developers, and may recover as a debt due to the Council by the Developers in a court of competent jurisdiction, any difference between the amount of the security deposit and the costs incurred by the Council in carrying out Rectification Works.

(h) The Developers must request that Council inspect the Works 20 Business Days prior to the end of the Defects Liability Period. The Council must inspect the Works at any time after receiving the request from the Developers and before to the end of the Defects Liability Period.

(i) If, prior to the end of the Defects Liability Period:

(i) the Developers fail to request the inspection, or

(ii) the Council does not carry out the inspection,

the Council may extend the Defects Liability Period so that the inspection may be carried out.

8 Risk

The Developers undertakes the Works entirely at their own risk.

9 Insurance

(a) Prior to the commencement of the construction of any of the Works, the Developers must ensure the Builder effects and the Developers must produce evidence to the Council of the following insurances issued by an insurer approved by the Council (acting reasonably) in a form approved by the Council (acting reasonably):

(i) construction works insurance for the value of the Works;

(ii) public risk insurance for at least $20 million;

(iii) workers compensation insurance as required by Law.

(b) The Developers must provide evidence of currency of insurance required by clause 9(a) of this Schedule 3 upon request by the Council, acting reasonably, throughout the term of this Deed.

10 Indemnities

The Developers indemnify the Council, its employees, officers, agents and contractors from and against all Claims in connection with the carrying out by the Developer of the Works except to the extent such Claim arises either directly or indirectly as a result of the Council or its employees, officers, agents, contractors or workmen's negligence, default, act or omission.

11 Intellectual Property Rights

The Council acknowledges that the Developers or its contractors hold all rights to copyright and any intellectual property which may exist in the Works. To the extent the Developers have or receive intellectual property rights for the Works, the Developer shall assign those intellectual property rights to Council or permit use thereof.

12 Risk of contamination

(a) The Developers acknowledge and agree:

(i) that they are responsible for the management and remediation of any contamination present upon or under the land on which the Works are to be carried out;

(ii) they will attend to any necessary remediation at their own cost; and

(iii) to the fullest extent permitted by law indemnify and release the Council from any Claim which might arise from any contamination caused by the Developers or its contractors as a result of the Works, with respect to the land on which the Works are to be carried out.

Schedule 4 - Explanatory Note

Planning Agreement

277 Cargo Road, Orange, NSW

1 Introduction

(a) The purpose of this Explanatory Note is to provide a summary to support the notification of a draft Planning Agreement (**Planning Agreement**) under section 7.4 of the *Environmental Planning and Assessment Act 1979* (**Act**), prepared in connection with the Instrument Change that seeks to amend the *Orange Local Environmental Plan 2011* (**LEP**) to:

(i) rezone the Land;

(ii) vary the minimum lot sizes; and

(iii) modify the terrestrial biodiversity mapping over the Land.

(b) This Explanatory Note has been prepared jointly by the parties to the Planning Agreement as required by clause 25E of the *Environmental Planning and Assessment Regulation* 2000 (**Regulation**).

(c) In this Explanatory Note, capitalised terms have the meaning given to those terms in the Planning Agreement unless otherwise defined.

(d) This Explanatory Note is not to be used to assist in construing the Planning Agreement.

2 Parties to the Planning Agreement

The parties to the Planning Agreement are:

(a) Orange City Council of 135 Byng Street, Orange, NSW (**Council**).

(b) Charms Developments Pty Limited (ACN 147 580 149) of 171 Margaret Street, Orange, NSW and Fenlor Group Pty Limited (ACN 93 072 632 430) of 1 Borrodell Drive, Orange, NSW (**Developers**); and

(c) Celestina Maria Vardanega of 277 Cargo Road, Orange NSW (**Owner**).

3 Description of the Land

The Planning Agreement applies to Lot A in Deposited Plan 408148 and known as 277 Cargo Road, Orange, NSW being the land comprised in certificate of title folio identifier A / 408148 (**Land**).

4 Description of the Instrument Change

The Developers wish to redevelop the Land. To facilitate the redevelopment of the Land an Instrument Change is being pursued that seeks to amend the *Orange Local Environmental Plan 2011* (**LEP**) to (amongst other things):

(i) rezone the Land;

(ii) vary the minimum lot sizes; and

(iii) modify the terrestrial biodiversity mapping over the Land.

The redevelopment of the Land that will be facilitated by the Instrument Change being pursued involves subdivision of the Land into up to 103 lots (containing up to 102 urban residential lots and 1 open space lot).

5 Summary of Objectives, Nature and Effect of the Planning Agreement

The objective of the Planning Agreement is to facilitate the following benefits to the Council:

(iv) dedication of part of the Land proposed for a public park (**Open Space Land**);

(v) carrying out of embellishment works to the Open Space Land prior to dedication; and

(vi) maintenance of the Open Space Land,

(together **Contributions**).

6 Assessment of the Merits of the Planning Agreement

6.1 How the Planning Agreement promotes the public interest and one or more of the objects of the Act

The Contributions under the Planning Agreement will be in the public interest because they increase public open space to meet the needs of the people who live, work or visit the locality that includes the Land. This will promote the social and economic welfare of the community.

In doing so, the Planning Agreement promotes the following objects of the Act:

(a) to promote the orderly and economic use and development of land (section 1.3(c)); and

(b) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources (section 1.3(a)).

6.2 How the Planning Agreement promotes the objects of the Local Government Act 1993 (*LG Act*) and the elements of the Council's charter

The Planning Agreement promotes the exercise by Council of its functions in accordance with the guiding principles set out in Chapter 3 of the LG Act because it will assist Council to provide infrastructure and public spaces for the benefit of the community in the area of the Development.

Council's strategic planning for the locality that includes the Land envisions an attractive, vibrant and sustainable residential developments.

In summary, the Planning Agreement promotes the Council's charter by ensuring the delivery of the public benefits under the Planning Agreement which in turn satisfy the following aspects of Council's charter under the LG Act:

(a) Councils should plan strategically for the provision of effective and efficient services and regulation to meet the diverse needs of the local community (section 8A(1)(c));

(b) Councils should manage lands and other assets so that current and future local community needs can be met in an affordable way (section 8A(1)(g)); and

(c) Council should work with others to secure the appropriate services for local community needs (section 8A(1)(g)).

6.3 Assessment of the merits of the Planning Agreement

In accordance with section 7.4(2) of the Act, the Planning Agreement promotes the public purposes of the provision of (or the recoupment of the cost of providing) public amenities or public services.

6.4 How the Planning Agreement promotes the public interest

The Planning Agreement requires the dedication of the Open Space Land and the carrying out of embellishment works to that land prior to dedication.

The Planning Agreement provides to Council a park which will enhance public amenities servicing the surrounding residential area.

6.5 Whether the Planning Instrument Conforms with the Council's Capital Works Program

The Planning Agreement conforms with Council's capital works program.

6.6 Whether the Planning Agreement specifies that certain requirements must be complied with before a construction certificate, occupation certificate or subdivision certificate is issued

The Planning Agreement does not impose such requirements. Rather, it proposes the embellishment and dedication of the Open Space Land at any time prior to or simultaneously with the registration of the final lot in the subdivision.

Signing page

Executed as a Deed

EXECUTED by **ORANGE CITY COUNCIL** by its General Manager pursuant to s733 and s 683 of the *Local Government Act 1993* in the presence of:

.....	.....
Signature of witness	Signature
.....	
Name of witness *(please print)*	

EXECUTED by **CHARMS DEVELOPMENTS PTY LTD** (ACN 147 580 149) in accordance with s127 of the *Corporations Act 2001*.

.....	.....
Signature of Director/Secretary	Signature of Director/Secretary
.....	.....
Name of Director/Secretary	Name of Director/Secretary

EXECUTED by **FENLOR GROUP PTY LTD** (ACN 072 632 430) in accordance with s127 of the *Corporations Act 2001*.

.....	.....
Signature of Director/Secretary	Signature of Director/Secretary
.....	.....
Name of Director/Secretary	Name of Director/Secretary

SIGNED SEALED AND DELIVERED by **CELESTINA MARIA VARDANEGA** in the presence of:

Signature of witness

Signature of **Celestina Maria Vardanega**

Name of witness *(please print)*

5.7 ORANGE AQUATIC CENTRE - 25M POOL HALL MAINTENANCE

RECORD NUMBER: 2024/1698
AUTHOR: Scott Maunder, Director Community, Recreation and Cultural Services

EXECUTIVE SUMMARY

To ensure the quality of the indoor pool is maintained it requires maintenance to be conducted from time to time.

This sees the indoor element, what is called the Pool Hall, close during the maintenance period.

This needs to be conducted during the period that the outdoor pool is open and operational as the closure of the indoor pool hall in other periods would see the centre not being able to offer access to any pools during the period of maintenance.

Timing of the closure also needs to take into account holiday periods.

A 2.5 week shut down of the pool hall is scheduled for the period 06 December to 23 December.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "2.3. Ensure the sporting and recreational facilities, programs and activities are accessible and affordable to support healthy lifestyle choices".

FINANCIAL IMPLICATIONS

Nil

POLICY AND GOVERNANCE IMPLICATIONS

Nil

RECOMMENDATION

That Council note the close of the indoor pool hall for maintenance as detailed in this report.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Maintenance on the 25m pool is required to ensure it meets the operational standards for public use and to avoid increased costs if maintenance is not carried out in a timely manner.

A shutdown period is scheduled for 6th – 23rd December for the conduct of:

1. Pool hall painting undertaken by Colour City Painting
2. 25m Pool

a. Removal and reinstallation of rubber seal above the in the construction (RADMAT) joint
    - The rubber seal on the joint has failed in multiple sections and is continuing to degrade
    - The pool is not leaking, but without repair, the continual degradation of the joint will expose the pool structure and underlying mat to chlorinated water and cause additional damage.
    - A contactor will remove the current rubber seal, remove any residual silicone and glue, prepare the tile surface, and reinstall a reinforced rubber seal over the RADMAT joint.
b. Inspect tiles and waterproofing
c. Inspection of filter media, scrap surface, test efficiency of sand and renew top layer
d. Service foot valve and clean balance tank

3. Leisure Pool
    a. Inspect surfaces and water proofing
    b. Complete maintenance on spa jets and water inlets
    c. Replace filter 2 laterals and renew filter media
    d. Inspect filter media condition in filters 1 & 3

IMPACTS ON USERS

Learn to swim classes will be impacted during this period which will be mitigated by moving these classes to the 50m pool. Learn to swim classes conclude on Sunday 15 December.

5.8 WELCOME TO SUMMER - ORANGE AQUATIC CENTRE

RECORD NUMBER: 2024/1577
AUTHOR: Scott Maunder, Director Community, Recreation and Cultural Services

EXECUTIVE SUMMARY

It is proposed to open the Aquatic Centre free of charge on Sunday 1 December 2024 to celebrate the start of summer, including the free use of inflatable equipment.

Council would also conduct a sausage sizzle on that day.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "2.2. Provide recreational activities and programs that are inclusive and meet the needs of the community".

FINANCIAL IMPLICATIONS

Estimated cost to Council to waive fees is $3,000 for cash entry and $1,000 for the cost of the sausage sizzle. Given the previous issues with behaviour $1,000 for security will also be required.

POLICY AND GOVERNANCE IMPLICATIONS

Council's approval is required to waive fees and charges.

RECOMMENDATIONS

That Council resolves to:

1 Grant free entry to the Aquatic Centre for the Start of Summer 1st December 2024 and;

2 Provide the use of inflatable equipment free of charge.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

To celebrate the start of summer it is proposed to open the Aquatic Centre free of charge on Sunday 1st December 2024 including making the use of inflatable equipment free of charge.

Council staff will also be conducting other activities including water obstacle course, free sausage sizzles and other water activities.

5.9 HOCKEY CENTRE RENOVATION - LOAN GUARANTEE

RECORD NUMBER: 2024/1694
AUTHOR: Scott Maunder, Director Community, Recreation and Cultural Services

EXECUTIVE SUMMARY

Council considered and approved a request for funding from Orange Hockey Incorporated "OHI" to refurbish the main hockey field, Smith Field, at the Orange Hockey Centre. (Attached is the notice of motion).

The works will include:

- the complete replacement of a single sand-based hockey field;
- Rectification of incorrect dimensions (Widening and lengthening) of the field and resolution of safety issues (safety fencing re-located to the correct distance from the sideline in accordance with FIH standards); and
- Curvature of the tortoise shell field design to bring it in line with FIH standards.

The works are estimated at $1.65M of which OHI has raised and secured through grants $1.2M.

To enable the works to be delivered an additional $450,000 is required.

OHI have approached their financial institution who have provisionally approved the application, and should Council agree to the guarantee that it would be approved.

OHI are seeking that guarantee from Council.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "2.1. Deliver sport and recreation facilities to service the community into the future".

FINANCIAL IMPLICATIONS

Nil

POLICY AND GOVERNANCE IMPLICATIONS

To comply with Strategic Policy - ST005 - Loan Guarantee

RECOMMENDATION

That Council resolves:

1 That Council guarantees a loan to Orange Hockey Incorporated up to an amount of $450,000 for the loan period of 15 years.

2 That the Chief Executive Officer be authorised to sign all relevant documents.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Orange Hockey Infrastructure is constructed on land owned by Orange City Council and the works will see the improvement of a public asset.

Since 1928 the Orange Hockey Club and OHI have demonstrated their ability to raise funds through operations and also to secure grants to support their projects.

This project has seen more than $1M secured through their own activities and successful grant applications.

OHI have a plan in place to raise funds to meet the loan repayments. These include:

- Hold carnivals which generates proceeds
- Increase the player base and operate at a profit each year
- Continue to apply for government grants
- Conduct various fund-raising activities.

Council has previously guaranteed a loan for OHI, which was repaid, and has also guaranteed loans for Emus Rugby Club and Orange Indoor Tennis.

ATTACHMENTS

1 CCL 4 June 2024 Notice of Motion - Consideration of Hockey Centre Budget Allocation, D24/124943⇩

2 Loan Guarantee Application Form - Hockey (redacted), D24/124946⇩

COUNCIL MEETING **4 JUNE 2024**

4.4 NOTICE OF MOTION - CONSIDERATION OF HOCKEY CENTRE BUDGET ALLOCATION

RECORD NUMBER: 2024/880

I, **CR TAMMY GREENHALGH** wish to move the following Notice of Motion at the Council Meeting of 4 June 2024:

MOTION

That Council include in budget considerations for 2024 – 2025 an allocation of $200,000 towards the upgrade of Smith Field at the Orange Hockey Centre.

BACKGROUND

The Orange Hockey Association is a not-for-profit organization run by volunteers. With over 1,000 they have been operating since 1928.

Their purpose is to provide a safe, inclusive, fun environment for people of local community, surrounding districts and visiting districts to enjoy well organised healthy sport of field hockey.

Smith hockey field is an essential community asset, nurturing a love for hockey among residents and visitors. Its current sand-based surface falls short of International Hockey Federation (FIH) standards, hindering safety and player performance, and limiting opportunity. The Smith field revitalisation will create a modern synthetic pitch, to FIH specification, fostering community engagement, inclusivity, and safety.

This project is a key element of OHI Strategic plan which aligns with Orange City Council Community Strategic Plan. The primary objective of the project is to transform the existing sand-based hockey field into a modern, state-of the-art synthetic turf pitch that complies with FIH regulations. By doing so, the aim is to create a more enjoyable, inclusive and competitive playing environment, attracting players of all levels, promoting community engagement, and hosting Regional and State-level tournaments.

The project scope will see the compete replacement of a single sand-based hockey field that will also see:

- Rectification of incorrect dimensions (Widening and lengthening) of the field and resolution of safety issues (safety fencing re-located to the correct distance from the sideline in accordance with FIH standards).
- Curvature of the tortoise shell field design to bring it in line with FIH standards.

The estimated cost of the project is 1.4M.

Over the past decade or so, OHI have accumulated $600k via fund raising efforts and secured funding of $300k through NSW Sport and Recreation Infrastructure Grant towards the cost of the project.

The cost estimates indicate that an additional $500,000 is required with OHI seeking support of $200,000 from Council. The remaining funds will be raised by further fundraising activities ($100,00) and OHI taking out a bank loan for the remaining funds of $200,000.

Signed Cr Tammy Greenhalgh

FINANCIAL/RESOURCING IMPLICATIONS

Nil. Should Council adopt the recommendation the allocation would be considered in the 2024 / 2025 budget for further discussion and debate.

POLICY AND GOVERNANCE IMPLICATIONS

Nil.

ORANGE CITY COUNCIL

All policies can be reviewed or revoked by a resolution of Council, at any time.

LOAN GUARANTEE APPLICATION FORM

Before completing this application, Council's Loan Guarantee Strategic Policy (ST005) should be read to ensure that your application will receive consideration by Council. Copies of the "Loan Guarantee Policy is available from Council's website www.orange.nsw.gov.au.

APPLICANT'S DETAILS

Name of organisation, group or person seeking loan guarantee

ORANGE HOCKEY INCORPORATE

Address

[redacted] ORANGE

Postal Address (if different from above)

[redacted]

Name and position of the contact person

Name Lisa Baffler

Position Treasurer

Phone (BH) _____ Phone (AH) _____

Phone (M) [redacted]

Email [redacted]

What is the legal status of your organisation? (eg Incorporated, Association, etc.)
If not for profit please attach evidence – such as charter/constitution showing no personal gain will be available to members, charitable status advice or a statutory declaration

Is your group / organisation registered for GST? (Yes) No

ABN (if applicable) 47 138 479 245 **ACN** (if applicable)

ORANGE CITY COUNCIL

All policies can be reviewed or revoked by a resolution of Council, at any time.

PROJECT DETAILS

Name of project to be supported	Smith Field Revitalisation		
Description of project to be supported	Replace, upgrade, lengthen + widen existing turf. The current turf does not align with the Federation of International Hockey (FIH) standards hindering safety, player performance + limiting opportunity to host carnivals/championships.		
Loan Amount	450,000	**Loan Term**	15yrs
Applicable interest rate	6.75%	**Fixed or variable**	variable
Anticipated loan repayments per annum (principal and interest)	$32,875		
Estimated useful life of the asset	15-20 years		
Details of Project Cost	Attached quote outlining cost of works.		

Total Project Cost (ex GST)	$ 1,665,100
Funding sources and amounts	
Cash	$ 985,100
Loan Borrowings	$ 450,000
Government Grants	$ 230,000
In-Kind Contributions	$
Other	$
Total Project Funding (should equal total project cost)	$ 1,665,100

ORANGE CITY COUNCIL

All policies can be reviewed or revoked by a resolution of Council, at any time.

ALIGNMENT TO THE COUNCIL'S STRATEGIC COMMUNITY PLAN

ALL APPLICANTS ARE TO COMPLETE THIS SECTION

Council must align its expenditure to the directions in the Community Strategic Plan (CSP). Copies of the CSP are available at Council offices, Libraries and from the Council website www.orange.nsw.gov.au. The CSP lists the directions and their associated strategies and objectives in detail and should be consulted to ensure your application links to the appropriate element(s). **Alignment with Councils CSP will substantially strengthen your application.**

Which direction from Council's Community Strategic Plan (CSP) does your application best align to? – select one from Our City, Our Community, Our Economy or Our Environment.

THEME: LIVE	
☒	A healthy, safe, inclusive and vibrant community – this theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.
Having consulted the Community Strategic Plan, which strategies in the LIVE theme does your project support? List the numbers of the strategies only.	List numbers: 1.2.3.4.5.

THEME: PRESERVE	
☐	Balancing the natural and built environment – this theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and development.
Having consulted the Community Strategic Plan, which strategies in the PRESERVE theme does your project support? List the numbers of the strategies only.	List numbers:

THEME: PROSPER	
☐	A smart, innovative and resilient economy – this theme focuses on providing the community with positive choices for investment, employment and study.
Having consulted the Community Strategic Plan, which strategies in the PROSPER theme does your project support? List the numbers of the strategies only.	List numbers:

THEME: COLLABORATE	
☐	Leadership and partnership – this theme looks at forging a collaborative community that engages with open and ongoing decision making.
Having consulted the Community Strategic Plan, which strategies in the COLLABORATE theme does your project support? List the numbers of the strategies only.	List numbers:

ORANGE CITY COUNCIL

All policies can be reviewed or revoked by a resolution of Council, at any time.

LOAN GUARANTEE COMPLIANCE STATEMENT

The following Compliance Statement is to be signed by a minimum of two authorised signatories of the applicant in accordance with the organisation's Constitution, Memorandum of Understanding, Memorandum of Articles, etc. The following Compliance Statement must be fully completed prior to any application for Council to act as Loan Guarantor being considered.

We, as Office Bearers of ORANGE HOCKEY INCORPORATED (the applicant), confirm that, if successful in receiving a loan guarantee from Council, the following requirements under the Orange City Council Loan Guarantee Policy will be adhered to:

1 Adherence to the Work Health and Safety Act and all relevant Work Health and Safety Guidelines.
2 Ensure that the project asset which is to be guaranteed by Council is adequately insured at all times during the term of the loan (Certificate of Currency to be supplied to Council each year).
3 Provide Council with annual updated reports concerning the operations of the organisation. These are to include, as a minimum:
   a revenue and expenditure statement;
   b balance sheet statement; and
   c cash flow statement.
4 The project asset will be utilised for the benefit of the wider community during the period of the loan guarantee.
5 All Loan Guarantee charges and associated fees will be paid by the Applicant.

In addition to adherence to the above items, we, as office bearers, confirm that to the best of our knowledge, there is no legal action pending against the organisation nor any outstanding Work Health and Safety issues.

Signature [redacted]	**Sign** [redacted]
Name Janeen Toner-Wasil	**Name** LISA BOUFFLER
Position President	**Position** TREASURER
Date 7/11/2024	**Date** 7/11/24

5.10 QUARTERLY BUDGET REVIEW AND PROGRESS REPORT - QUARTER 1 OF 2024/2025

RECORD NUMBER: 2024/1663
AUTHOR: Claire Wright, Acting Chief Financial Officer

EXECUTIVE SUMMARY

This report presents the Quarterly Budget Review for the first quarter of the financial year ending 30 June 2025. The purpose of the quarterly budget review is to advise the Council of the forecasted financial position and present any variations for approval that have occurred since the original budget.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "18.2. Ensure financial stability and support efficient ongoing operation".

FINANCIAL IMPLICATIONS

The September Quarterly Review has identified variations totalling $688,868 to Council's Operating Result before capital, decreasing the Operating Surplus to $6,376,485. General Funds operating deficit has increased from $186k to $359k.

Table 1 below presents Council's Operating result before Capital - by Fund.

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Consolidated				
Income from Continuing Operations	176,976,191	37,458,316	214,434,507	83,037,021
less Expenditure for Continuing Operations	125,480,121	4,078,954	129,559,075	31,429,620
Net Operating Result from Contining Operations	51,496,070	33,379,362	84,875,432	51,607,401
less Capital Grants and Contributions	43,657,299	34,167,154	77,725,529	7,259,320
Operating Result before Capital	**7,838,771**	**(688,868)**	**7,149,903**	**44,348,081**

POLICY AND GOVERNANCE IMPLICATIONS

Nil.

RECOMMENDATION

That Council resolves:

1 **That the information provided in the report on the Quarterly Budget and Performance Indicators review for July – September 2024 be acknowledged.**

2 **To adopt the variations in the consolidated overall cost to Council arising from the September 2024 quarterly review in the amount of $688,868.**

SUPPORTING INFORMATION

Income – Increase of $1.16m

The September quarter budget variations for new income has increased favourably by $1.16m, including capital. This includes new grants include Open Space and Recreation Study, Orange Strategic Transport Model Update, and Aged Care Volunteer Visitors Scheme, (ACVVS). The Orange Regional Conservatorium and Planetarium grant income has been re-budgeted to align with the project's construction plan and funding sources, reducing capital income by $8m.

Additionally, the September quarter budget includes carry forward adjustments for projects and grants not completed in the 2023-2024 financial year. This totals $44.2m of income across capital and operating grants.

Income streams such as User Charges and Fees and Other Revenues are currently on track as generally their rate of receipt is consistent throughout the year. As Council's annual rates are levied in July of each year, this income is almost fully recognised in the first quarter.

Other income streams are subject to external influences including occurrences of development, or the success of grant applications. These income streams are routinely reviewed, and adjusted as appropriate, at each quarterly review.

Figure 1 below provides a snapshot of the split of Council's income against budget. Noting investment interest is accrued at the end of the financial year to accurately reflect 2023-2024 earnings but then progressively recognised through the year as investments mature and interest is received.

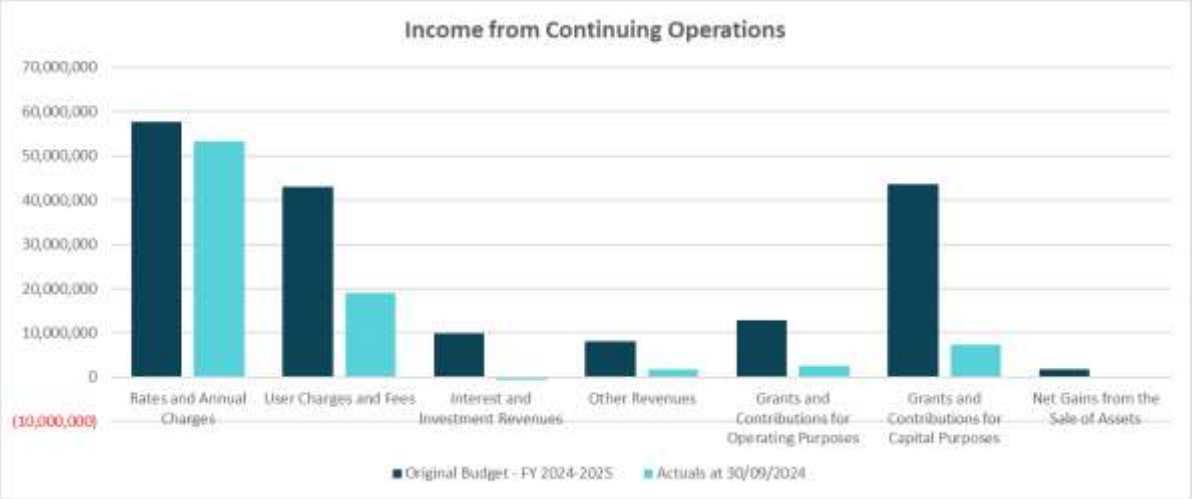


Figure 1: Income with Original Budget (FY 2024/2025) and Actuals as at 30th September 2024

Operating Expenditure

The September quarter budget variations for operational expenditure has increased by $4m mainly due carry forward projects and costs associated with new operational grants. A list of major variations is included in the attached report.

Actual expenditure is tracking in line as expected, however there could be pressure on existing budgets as rising and escalating costs are realised. Project materials and contactor price increases of around 25% continue to be experienced and will continue to impact the budget in the foreseeable future.

In general, Council's routine operational expenses should be incurred at a consistent rate. These include expense groupings such as Employee Costs, Materials and Contracts, Depreciation and Other Expenses.

Figure 2 provides a snapshot of the split of Council's operating expenditure.

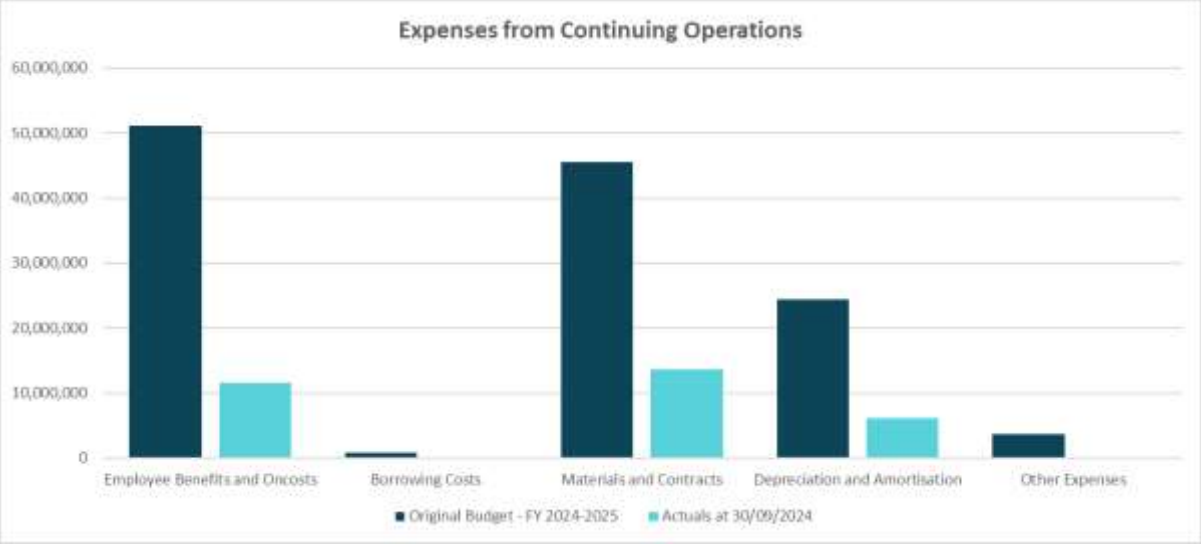


Figure 2: Expenditure Report with Revised Budget (FY 2023/2024) and Actuals as at 30th September 2024

Capital Expenditure – Adjustment of $2.1m

The September quarter budget variations for capital expenditure has increased by $43.8m. Capital projects that were not completed in last financial year have been carried forward to this financial year. A list of major variations is included in the attached report. The table below represents Council's capital expenditure by fund.

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Consolidated				
Capital Funding	47,158,958	34,167,154	81,326,112	7,811,362
less Capital Expenditure	94,001,776	43,847,071	137,848,847	11,231,849
plus New Loans	18,500,000	3,000,000	21,500,000	0
plus Rates & other untied funding	7,838,771	(688,868)	7,149,903	44,348,081
plus Adjust for Non-Cash Depreciation	24,370,099	0	24,370,099	6,092,525
Unrestricted Reserves - increase / (decrease)*	**3,866,052**	**(7,368,785)**	**(3,502,733)**	**47,020,118**
*excludes budgeted use of reserves	Increase	Decrease	Decrease	

Table 2: Projected Capital Budget Result

Council's capital expenditure is funded by a mix of funding sources. The following table shows the funding source for capital expenditure.

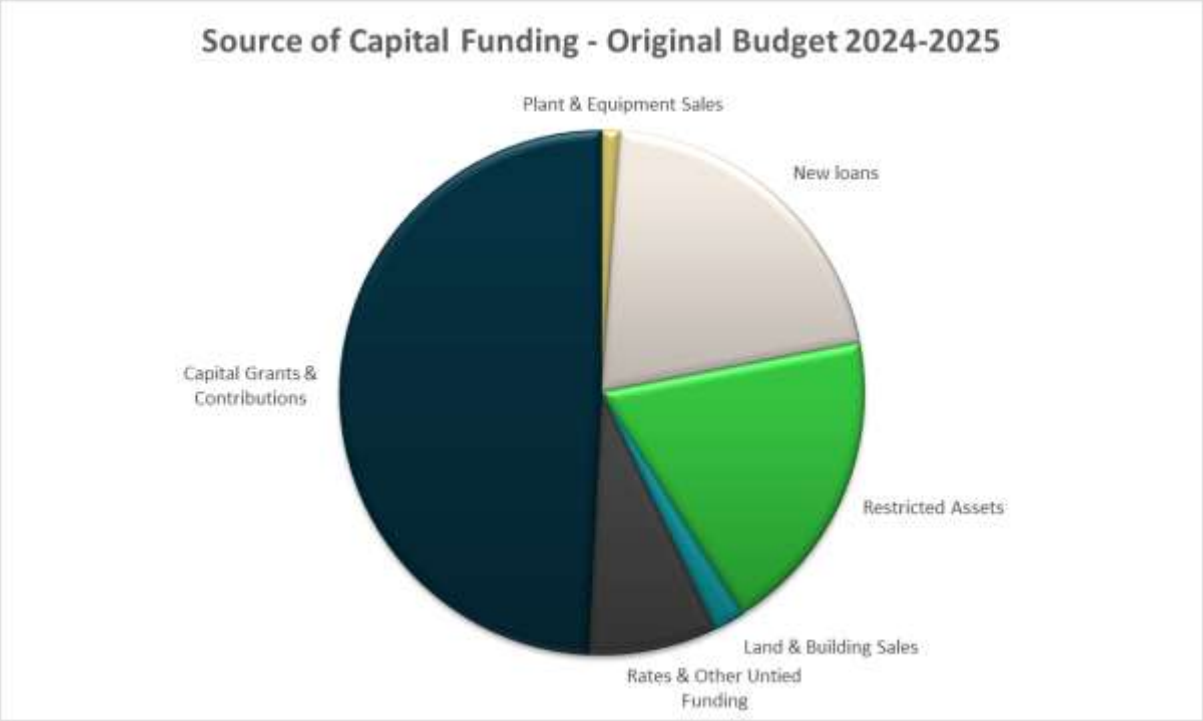


Figure 3: Capital Funding Sources

Cash Restrictions

The September quarter budget variations for restricted asset movements has resulted in a draw down on reserves of $2.7m. These variations will result in a predicted total cash held of $212m. The Table below shows the restricted cash held by each fund and the projected closing balance. The detail list of restrictions is included in the attached report.

Cash Restrictions Movements

Fund	Opening Balance	Adopted Budget Transfers	Proposed Variations Transfers	Projected Closing Balance
General	73,468,551	(1,317,970)	0	72,150,581
Water	79,294,501	853,787	0	80,148,288
Sewer	56,971,421	3,202,848	0	60,174,269
Total	**209,734,473**	**2,738,665**	**0**	**212,473,138**

Table 2: Cash Restrictions Movements

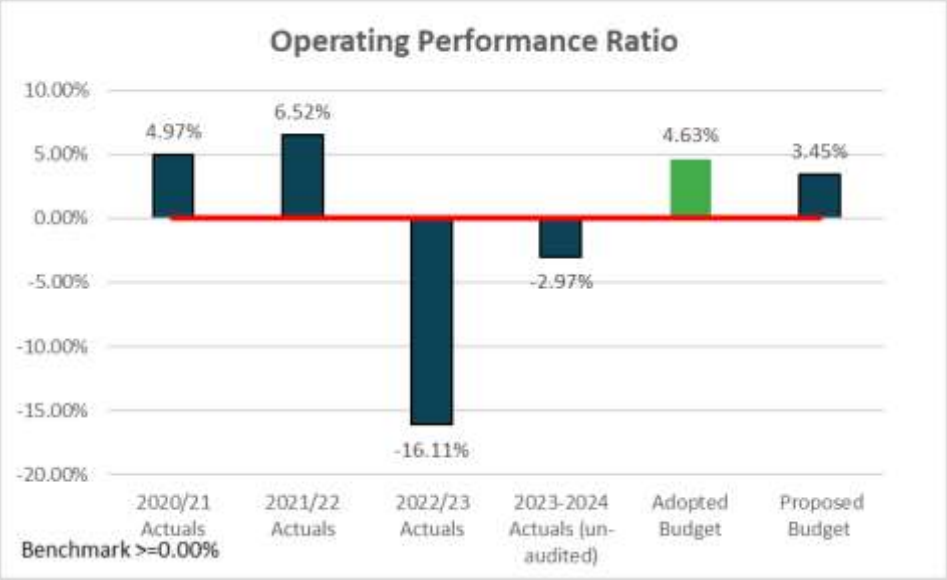
Financial Performance Indicators

The tables below represent financial performance against local government industry indicators from the annual financial statements. The charts compare actual performance from the last 3 years against the adopted 2024/25 budget and the proposed Q1 revised 2024/25 budget.

Operating Performance Ratio:

The purpose of the operating performance ratio is to measure the extent to which Council succeeds in containing operating expenditure within operating revenue (excluding capital grants and contributions).

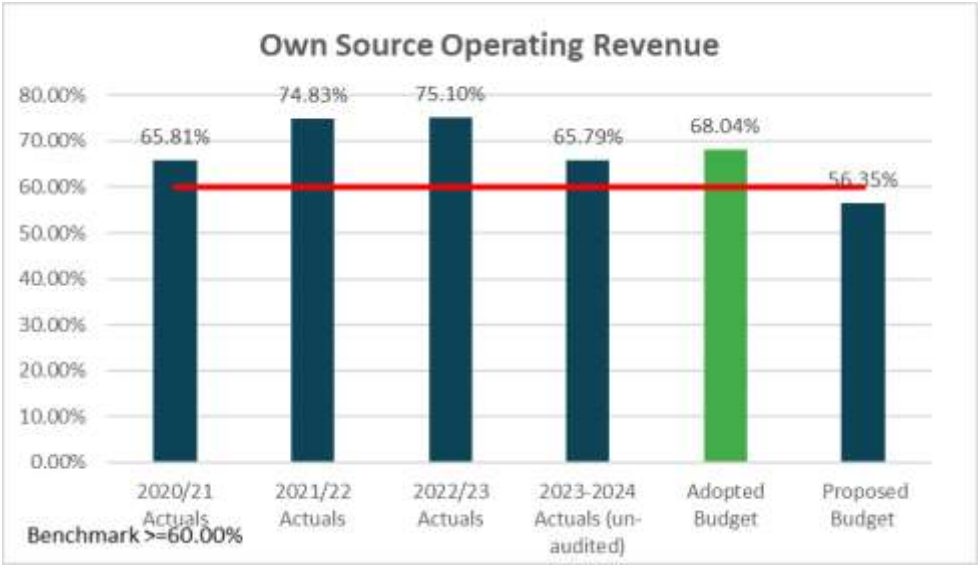
The performance to date indicates Council is tracking above the benchmark for the 2024/25 year. The 2022/23 result is reflective of the transfer of the Northern Distributor to the NSW State Government.



Own Source Operating Revenue:

The purpose of the own source operating revenue ratio is to measure fiscal flexibility by analysing the degree of reliance on external funding sources.

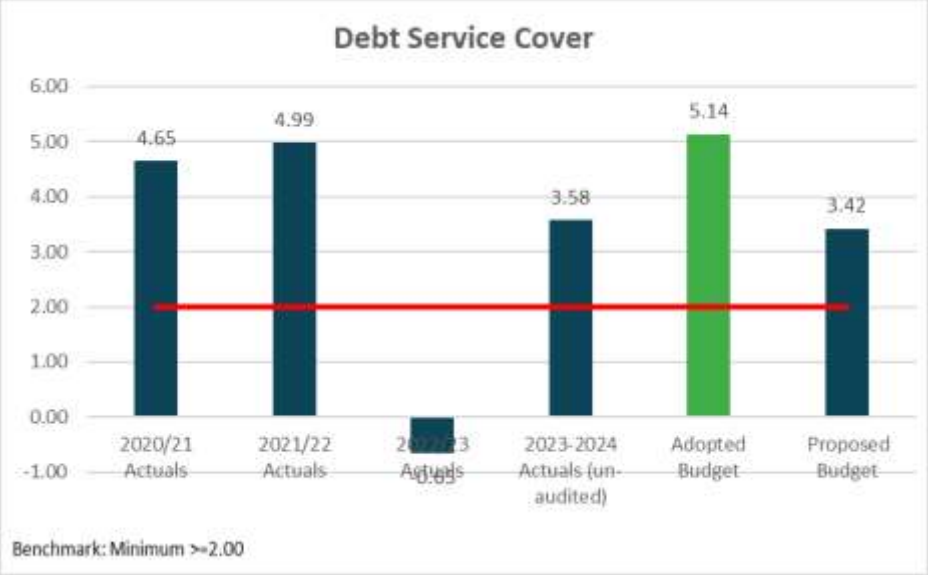
The performance to date indicates Council has met the benchmark for the past 3 years. The 2024/25 quarter 1 proposed revisions have resulted in a drop below benchmark due the significant amount of expected funding to come from capital grants and contributions for major projects in 2024/25.



Debt Service Cover:

The purpose of the debt service cover ratio is to measure the availability of operating cash to service debt including interest, principal and lease payments.

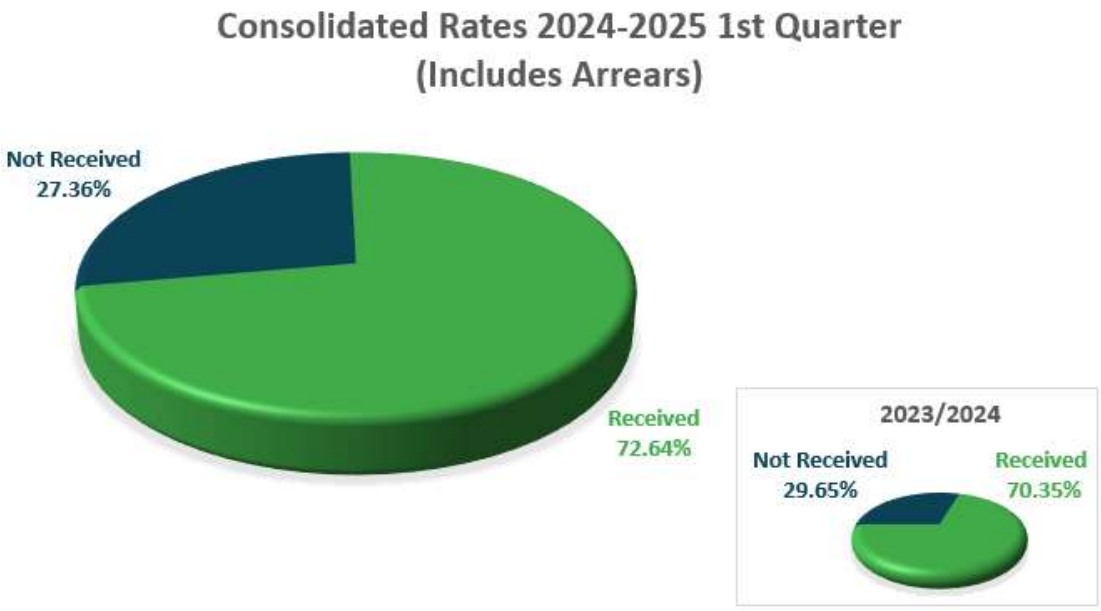
The performance for the 2023-2024 year (unaudited) indicates Council is meeting benchmark of above 2. Council has budgeted to take out a $18.5m loan in the 2024/2025 financial year, impacting the drop in the ratio in the adopted budget. The 2022/23 result is reflective of the transfer of the Northern Distributor to the NSW State Government.



Rates and Charges Collection

At September 2024, a total of $8.1m (27.36%) remains outstanding for rates and annual charges. For the purposes of comparison, for the same quarter last financial year, $7.9m (29.65%) of the amount payable remained outstanding.

Rate Collection as at Q1 2024/25 vs Q1 2023/24



During the quarter council received payments for rates and charges of $21m. The next rate instalment is due on the 30th November 2024 and Council staff will continue to monitor outstanding rates and charges, a third-party has been engaged to assist in more active debt recovery actions.

The attached Quarterly Budget Review Statement (QBRS) has been updated to reflect the Office of Local Government's recommended QBRS format.

Report by Responsible Accounting Officer

The following statement is made in accordance with Clause 203(2) of the Local Government (General) Regulation 2021:

As the Responsible Accounting Officer, it is my opinion that the Quarterly Budget Review Statement for Orange City Council for the quarter ended 30 September 2024 indicates that Council's projected financial position for 30 June 2025 will be satisfactory having regard to the project estimates of income and expenditure, and variations contained therein.

Claire Wright, Responsible Accounting Officer

ATTACHMENTS

1 Quarterly Budget Review Statement (QBRS) Council Summary Q1 September 2024 - 2025, D24/124948⇩

Quarterly Budget Review Statement
for the period 01/07/2024 to 31/09/2024

Table of contents

1. **Summary report**

2. **Operating budget review statements**
   - Consolidated
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4. **Major variations**
   - Operating Income
   - Operating Expenditure
   - Capital Income
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5. **Cash Restrictions**
   - External Restrictions
   - Internal Restrictions

6. **Key performance indicators**

7. **Contracts and other expenses**

ORANGE CITY COUNCIL

Summary - Budget Review for the quarter ended: 30 September 2024

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Consolidated				
Income from Continuing Operations	176,976,191	37,458,316	214,434,507	83,037,021
less Expenditure for Continuing Operations	125,480,121	4,078,954	129,559,075	31,429,620
Net Operating Result from Contining Operations	51,496,070	33,379,362	84,875,432	51,607,401
less Capital Grants and Contributions	43,657,299	34,167,154	77,725,529	7,259,320
Operating Result before Capital	**7,838,771**	**(688,868)**	**7,149,903**	**44,348,081**
Capital Funding	47,158,958	34,167,154	81,326,112	7,811,362
less Capital Expenditure	94,001,776	43,847,071	137,848,847	11,231,849
plus New Loans	18,500,000	3,000,000	21,500,000	0
plus Rates & other untied funding	7,838,771	(688,868)	7,149,903	44,348,081
plus Adjust for Non-Cash Depreciation	24,370,099	0	24,370,099	6,092,525
Unrestricted Reserves - increase / (decrease)*	**3,866,052**	**(7,368,785)**	**(3,502,733)**	**47,020,118**
*excludes budgeted use of reserves	Increase	Decrease	Decrease	

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
General Fund				
Income from Continuing Operations	135,138,436	37,458,316	172,596,752	65,669,828
less Expenditure for Continuing Operations	95,927,882	3,748,954	99,676,836	18,884,349
Net Operating Result from Contining Operations	39,210,554	33,709,362	72,919,916	46,785,480
less Capital Grants and Contributions				
Operating Result before Capital	**(186,461)**	**(358,868)**	**(545,329)**	**41,871,094**
Capital Funding	42,383,887	34,086,230	76,470,117	5,403,347
less Capital Expenditure	56,417,516	52,592,280	109,009,796	8,036,782
plus Rates & other untied funding	(186,461)	(358,868)	(545,329)	41,871,094
plus Adjust for Non-Cash Depreciation	15,207,405	0	15,207,405	3,801,851
Unrestricted Reserves - increase / (decrease)*	**19,487,315**	**(15,864,918)**	**3,622,397**	**43,039,510**
*excludes budgeted use of reserves	Increase	Decrease	Increase	

Summary - Budget Review for the quarter ended: 30 September 2024

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Water				
Income from Continuing Operations	24,015,875	0	24,015,875	6,240,418
less Expenditure for Continuing Operations	17,614,972	330,000	17,944,972	7,496,439
Net Operating Result from Contining Operations	6,400,903	(330,000)	6,070,903	(1,256,021)
less Capital Grants and Contributions	2,382,972	0	2,382,972	1,856,679
Operating Result before Capital	**4,017,931**	**(330,000)**	**3,687,931**	**(3,112,700)**
Capital Funding	2,696,497	45,924	2,742,421	1,856,679
less Capital Expenditure	23,613,626	(8,692,629)	14,920,997	1,453,818
plus Rates & other untied funding	4,017,931	(330,000)	3,687,931	(3,112,700)
plus Adjust for Non-Cash Depreciation	5,453,778	0	5,453,778	1,363,445
Unrestricted Reserves - increase / (decrease)*	**(11,445,420)**	**8,408,553**	**(3,036,867)**	**(1,346,394)**
*excludes budgeted use of reserves	Decrease	Increase	Decrease	

	Original Budget	Proposed Variations	Proposed Revised	Actuals YTD 30-Sep-24
Sewer				
Income from Continuing Operations	17,821,880	0	17,821,880	11,126,775
less Expenditure for Continuing Operations	12,405,317	0	12,405,317	5,048,833
Net Operating Result from Contining Operations	5,416,563	0	5,416,563	6,077,942
less Capital Grants and Contributions	1,409,262	0	1,409,262	488,255
Operating Result before Capital	**4,007,301**	**0**	**4,007,301**	**5,589,687**
Capital Funding	2,078,574	35,000	2,113,574	551,336
less Capital Expenditure	13,970,634	(52,580)	13,918,054	1,741,250
plus Rates & other untied funding	4,007,301	0	4,007,301	5,589,687
plus Adjust for Non-Cash Depreciation	3,708,916	0	3,708,916	927,229
Unrestricted Reserves - increase / (decrease)*	**(4,175,843)**	**87,580**	**(4,088,263)**	**5,327,002**
*excludes budgeted use of reserves	Decrease	Increase	Decrease	

This document forms part of Orange City Council's Quarterly Budget Review Statement (QBRS) for the quarter shown above and should be read in conjunction with the other QBRS documents.

Consolidated - Budget Review for the quarter ended: 30 September 2024

Income & Expenses - Continuing Operations

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Income				
Rates and Annual Charges	57,738,753	192,938	57,931,691	53,318,937
User Charges and Fees	43,061,743	0	43,061,743	18,965,137
Other Revenues	8,039,737	230,309	8,270,046	1,658,249
Grants & Contributions for Operating Purposes	12,905,559	2,966,839	15,872,398	2,499,733
Grants & Contributions for Capital Purposes	43,657,299	34,068,230	77,725,529	7,259,320
Interest and Investment Income	9,906,400	0	9,906,400	(664,354)
Net Gains from the Sale of Assets	1,666,700	0	1,666,700	0
Total Income from Continuing Operations	**176,976,191**	**37,458,316**	**214,434,507**	**83,037,021**
Expenses				
Employee Benefits and Oncosts	51,087,645	268,578	51,356,223	11,644,541
Materials and Contracts	45,498,476	3,770,451	49,268,927	13,592,278
Borrowing Costs - Operational	866,214	39,925	906,139	86,160
Depreciation and Amortisation	24,370,099	0	24,370,099	6,092,525
Other Expenses	3,657,687	0	3,657,687	14,117
Net Loss from the Sale of Assets	0	0	0	0
Total Expenses from Continuing Operations	**125,480,121**	**4,078,954**	**129,559,075**	**31,429,620**
Net Operating Result from Contining Operations	51,496,070	33,379,362	84,875,432	51,607,401
Net Operating Result before Capital Items	**7,838,771**	**(688,868)**	**7,149,903**	**44,348,081**
	Increase	Decrease	Increase	

Notes:

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General Fund - Budget Review for the quarter ended: 30 September 2024

Income & Expenses - Continuing Operations

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Income				
Rates and Annual Charges	51,273,833	192,938	51,466,771	51,626,695
User Charges and Fees	18,626,357	0	18,626,357	5,537,673
Other Revenues	6,979,621	230,309	7,209,930	1,443,522
Grants & Contributions for Operating Purposes	12,576,142	2,966,839	15,542,981	2,499,733
Grants & Contributions for Capital Purposes	39,865,065	34,068,230	73,933,295	4,914,386
Interest and Investment Income	4,150,718	0	4,150,718	(352,180)
Net Gains from the Sale of Assets	1,666,700	0	1,666,700	0
Total Income from Continuing Operations	**135,138,436**	**37,458,316**	**172,596,752**	**65,669,828**
Expenses				
Employee Benefits and Oncosts	46,457,985	268,578	46,726,563	10,180,715
Materials and Contracts	30,042,721	3,440,451	33,483,172	4,806,893
Borrowing Costs - Operational	687,427	39,925	727,352	80,772
Borrowing Costs - Capital	468,050	0	468,050	0
Depreciation and Amortisation	15,207,405	0	15,207,405	3,801,851
Other Expenses	3,064,294	0	3,064,294	14,117
Net Loss from the Sale of Assets	0	0	0	0
Total Expenses from Continuing Operations	**95,927,882**	**3,748,954**	**99,676,836**	**18,884,349**
Net Operating Result from Contining Operations	39,210,554	33,709,362	72,919,916	46,785,480
Net Operating Result before Capital Items	**(186,461)**	**(358,868)**	**(545,329)**	**41,871,094**
	Decrease	Decrease	Decrease	

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Water Fund - Budget Review for the quarter ended: 30 September 2024

Income & Expenses - Continuing Operations

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Income				
Rates and Annual Charges	6,464,920	0	6,464,920	1,692,241
User Charges and Fees	11,127,229	0	11,127,229	2,590,724
Other Revenues	739,733	0	739,733	113,813
Grants & Contributions for Operating Purposes	152,951	0	152,951	0
Grants & Contributions for Capital Purposes	2,382,972	0	2,382,972	1,856,679
Interest and Investment Income	3,148,070	0	3,148,070	(13,040)
Net Gains from the Sale of Assets	0	0	0	0
Total Income from Continuing Operations	**24,015,875**	**0**	**24,015,875**	**6,240,418**
Expenses				
Employee Benefits and Oncosts	2,576,100	0	2,576,100	860,652
Materials and Contracts	8,817,319	330,000	9,147,319	5,268,857
Borrowing Costs - Operational	174,382	0	174,382	3,485
Depreciation and Amortisation	5,453,778	0	5,453,778	1,363,445
Other Expenses	593,393	0	593,393	0
Net Loss from the Sale of Assets	0	0	0	0
Total Expenses from Continuing Operations	**17,614,972**	**330,000**	**17,944,972**	**7,496,439**
Net Operating Result from Contining Operations	6,400,903	(330,000)	6,070,903	(1,256,021)
Net Operating Result before Capital Items	**4,017,931**	**(330,000)**	**3,687,931**	**(3,112,700)**
	Increase	Decrease	Increase	

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Sewer Fund - Budget Review for the quarter ended: 30 September 2024

Income & Expenses - Continuing Operations

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Income				
Rates and Annual Charges	0	0	0	0
User Charges and Fees	13,308,157	0	13,308,157	10,836,740
Other Revenues	320,383	0	320,383	100,915
Grants & Contributions for Operating Purposes	176,466	0	176,466	0
Grants & Contributions for Capital Purposes	1,409,262	0	1,409,262	488,255
Interest and Investment Income	2,607,612	0	2,607,612	(299,134)
Net Gains from the Sale of Assets	0	0	0	0
Total Income from Continuing Operations	**17,821,880**	**0**	**17,821,880**	**11,126,775**
Expenses				
Employee Benefits and Oncosts	2,053,560	0	2,053,560	603,173
Materials and Contracts	6,638,436	0	6,638,436	3,516,528
Borrowing Costs - Operational	4,405	0	4,405	1,903
Depreciation and Amortisation	3,708,916	0	3,708,916	927,229
Other Expenses	0	0	0	0
Net Loss from the Sale of Assets	0	0	0	0
Total Expenses from Continuing Operations	**12,405,317**	**0**	**12,405,317**	**5,048,833**
Net Operating Result from Contining Operations	5,416,563	0	5,416,563	6,077,942
Net Operating Result before Capital Items	**4,007,301**	**0**	**4,007,301**	**5,589,687**
	Increase	Nil	Increase	

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Consolidated - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Capital Funding				
Total Income from the Sale of Assets	**2,693,659**	**98,924**	**2,792,583**	**552,042**
Total Loan Income	**808,000**	**0**	**808,000**	**0**
Grants and Contributions for Capital Purposes				
Capital Grants	36,974,537	34,068,230	71,042,767	5,688,192
Capital Contributions	514,321	0	514,321	214,034
Contributions - Section 64	3,792,234	0	3,792,234	1,280,904
Contributions - Section 7.11	2,376,207	0	2,376,207	75,631
Total Grants and Contributions for Capital	**43,657,299**	**34,068,230**	**77,725,529**	**7,259,320**
Total Capital Funding	**47,158,958**	**34,167,154**	**81,326,112**	**7,811,362**
Capital Expenditure				
Capital Renewals				
Plant & Equipment	156,373	0	156,373	0
Office Equipment	5,248	0	5,248	0
Furniture & Fittings	0	10,335	10,335	0
Buildings	992,301	679,401	1,671,702	250,322
Other Structures	23,839,250	22,813,838	46,653,088	369,816
Roads.	2,129,367	169,627	2,298,994	2,861
Stormwater Drainage	70,000	0	70,000	0
Water Supply Network	1,691,000	1,211,375	2,902,375	160,045
Sewer Network	1,120,000	692,541	1,812,541	925
Other	1,342,026	913,145	2,255,171	913,008
Total Capital Renewals	**31,345,565**	**26,490,262**	**57,835,827**	**1,696,977**
Capital Upgrades				
Sewer Network	0	0	0	16,174
Other	50,000	42,000	92,000	0
Total Capital Upgrades	**238,460**	**42,000**	**280,460**	**72,194**

Consolidated - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Capital Replacements				
Plant & Equipment	4,931,321	2,633,074	7,564,395	1,487,041
Office Equipment	25,000	0	25,000	30,438
Furniture & Fittings	0	0	0	0
Land.	910,000	5,000	915,000	66,269
Buildings	9,197,274	5,730,634	14,927,908	1,551,841
Other Structures	4,120,252	(400,932)	3,719,320	719,139
Roads, Bridges, Footpaths	7,308,514	11,793,617	19,102,131	1,499,569
Stormwater Drainage	2,600,000	2,108,459	4,708,459	121,147
Water Supply Network	16,603,000	(7,102,720)	9,500,280	988,842
Sewer Network	10,750,000	(452,323)	10,297,677	1,490,750
Library Books	401,645	0	401,645	81,661
Other	0	0	0	0
Total Capital Replacements	**56,847,006**	**14,314,809**	**71,161,815**	**8,036,696**
Total Loan Repayments	**5,570,745**	**3,000,000**	**8,570,745**	**1,425,983**
Total Capital Expenditure	**94,001,776**	**43,847,071**	**137,848,847**	**11,231,849**
Net Capital Result	**(46,842,818)**	**(9,679,917)**	**(56,522,735)**	**(3,420,488)**
Funding				
New Loans	18,500,000	3,000,000	21,500,000	0
Restricted Assets - transfers from	16,858,008	(19,576,673)	(8,693,665)	304,280
Rates & other untied funding	7,838,771	(688,868)	7,149,903	44,348,081
Adjust for Non-Cash Depreciation	24,370,099	0	24,370,099	6,092,525
Unrestricted Reserves - increase / (decrease)	**20,724,060**	**(26,945,458)**	**(12,196,398)**	
	Increase	Decrease	Decrease	

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General Fund - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Capital Funding				
Total Income from the Sale of Assets	**2,518,822**	**18,000**	**2,536,822**	**488,961**
Grants and Contributions for Capital Purposes				
Capital Grants	36,974,537	34,068,230	71,042,767	4,624,722
Sewer Capital Contributions	0	0	0	0
Capital Contributions	514,321	0	514,321	214,034
Planning Agreements - Capital	0	0	0	0
Contributions - Section 64	0	0	0	0
Contributions - Section 7.11	2,376,207	0	2,376,207	75,631
Total Grants and Contributions for Capital	**39,865,065**	**34,068,230**	**73,933,295**	**4,914,386**
Total Capital Funding	**42,383,887**	**34,086,230**	**76,470,117**	**5,403,347**
Capital Expenditure				
Capital Renewals				
Plant & Equipment	6,373	0	6,373	0
Office Equipment	5,248	0	5,248	0
Buildings	992,301	679,401	1,671,702	250,322
Other Structures	23,779,250	22,813,838	46,593,088	369,816
Roads.	2,129,367	169,627	2,298,994	2,861
Stormwater Drainage	70,000	0	70,000	0
Other	742,026	1,513,145	2,255,171	913,008
Total Capital Renewals	**27,724,565**	**25,186,346**	**52,910,911**	**1,536,007**
Capital Upgrades				
Total Capital Upgrades	**0**	**0**	**0**	**0**

General Fund - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Capital Replacements				
Plant & Equipment	3,584,137	2,106,536	5,690,673	1,260,712
Office Equipment	25,000	0	25,000	30,438
Land.	0	5,000	5,000	66,269
Buildings	9,197,274	5,730,634	14,927,908	1,551,841
Other Structures	520,252	2,661,688	3,181,940	718,971
Roads, Bridges, Footpaths	7,308,514	11,793,617	19,102,131	1,499,569
Stormwater Drainage	2,600,000	2,108,459	4,708,459	121,147
Library Books	401,645	0	401,645	81,661
Total Capital Replacements	**23,636,822**	**24,405,934**	**48,042,756**	**5,330,608**
Loan Repayments				
Total Loan Repayments	**5,056,129**	**3,000,000**	**8,056,129**	**1,170,167**
Total Capital Expenditure	**56,417,516**	**52,592,280**	**109,009,796**	**8,036,782**
Net Capital Result	**(14,033,629)**	**(18,506,050)**	**(32,539,679)**	**(2,633,435)**
Funding				
New Loans	18,500,000	3,000,000	21,500,000	0
Restricted Assets - transfers from	2,459,643	(1,141,673)	1,317,970	304,280
Rates & other untied funding	(186,461)	(358,868)	(545,329)	41,871,094
Adjust for Non-Cash Depreciation	15,207,405	0	15,207,405	3,801,851
Unrestricted Reserves - increase / (decrease)	**21,946,958**	**(17,006,591)**	**4,940,367**	
	Increase	Decrease	Increase	

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Water Fund - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Capital Funding				
Income from the Sale of Assets				
Plant & Equipment	103,837	45,924	149,761	0
Total Income from the Sale of Assets	**103,837**	**45,924**	**149,761**	**0**
Loan Receivables				
Total Loan Income	**209,688**	**0**	**209,688**	**0**
Grants and Contributions for Capital Purposes				
Capital Grants	0	0	0	1,063,470
Contributions - Section 64	2,382,972	0	2,382,972	793,209
Total Grants and Contributions for Capital	**2,382,972**	**0**	**2,382,972**	**1,856,679**
Total Capital Funding	**2,696,497**	**45,924**	**2,742,421**	**1,856,679**
Capital Expenditure				
Capital Renewals				
Other Structures	60,000	0	60,000	0
Water Supply Network	1,691,000	1,211,375	2,902,375	160,045
Total Capital Renewals	**1,751,000**	**1,211,375**	**2,962,375**	**160,045**
Capital Upgrades				
Water Network	188,460	0	188,460	56,019
Total Capital Upgrades	**188,460**	**0**	**188,460**	**56,019**
Capital Replacements				
Plant & Equipment	228,329	261,336	489,665	83,290
Land.	910,000	0	910,000	0
Other Structures	3,600,000	(3,062,620)	537,380	168
Water Supply Network	16,603,000	(7,102,720)	9,500,280	988,842
Total Capital Replacements	**21,341,329**	**(9,904,004)**	**11,437,325**	**1,072,300**

Water Fund - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Loan Repayments				
LIRS	332,837	0	332,837	165,454
Total Loan Repayments	**332,837**	**0**	**332,837**	**165,454**
Total Capital Expenditure	**23,613,626**	**(8,692,629)**	**14,920,997**	**1,453,818**
Net Capital Result	**(20,917,129)**	**8,738,553**	**(12,178,576)**	**402,861**
Funding				
New Loans				
Restricted Assets - transfers from	11,626,213	(12,460,000)	(833,787)	0
Rates & other untied funding	4,017,931	(330,000)	3,687,931	(3,112,700)
Adjust for Non-Cash Depreciation	5,453,778	0	5,453,778	1,363,445
Unrestricted Reserves - increase / (decrease)	**180,793**	**(4,051,447)**	**(3,870,654)**	
	Increase	Decrease	Decrease	

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Sewer Fund - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Capital Funding				
Income from the Sale of Assets				
Total Income from the Sale of Assets	**71,000**	**35,000**	**106,000**	**63,081**
Loan Receivables				
Total Loan Income	**598,312**	**0**	**598,312**	**0**
Grants and Contributions for Capital Purposes				
Contributions - Section 64	1,409,262	0	1,409,262	487,695
Total Grants and Contributions for Capital	**1,409,262**	**0**	**1,409,262**	**488,255**
Total Capital Funding	**2,078,574**	**35,000**	**2,113,574**	**551,336**
Capital Expenditure				
Capital Renewals				
Plant & Equipment	150,000	0	150,000	0
Sewer Network	1,120,000	692,541	1,812,541	925
Other	600,000	(600,000)	0	0
Total Capital Renewals	**1,870,000**	**92,541**	**1,962,541**	**925**
Capital Upgrades				
Sewer Network	0	0	0	16,174
Other	50,000	42,000	92,000	0
Total Capital Upgrades	**50,000**	**42,000**	**92,000**	**16,174**
Capital Replacements				
Plant & Equipment	1,118,855	265,202	1,384,057	143,039
Sewer Network	10,750,000	(452,323)	10,297,677	1,490,750
Total Capital Replacements	**11,868,855**	**(187,121)**	**11,681,734**	**1,633,788**

Sewer Fund - Budget Review for the quarter ended: 30 September 2024

Capital Budget

	Original Budget 2024/25	Proposed Variations	Proposed Revised Budget	Actuals YTD 30-Sep-24
Loan Repayments				
LIRS	181,779	0	181,779	90,362
Total Loan Repayments	**181,779**	**0**	**181,779**	**90,362**
Total Capital Expenditure	**13,970,634**	**(52,580)**	**13,918,054**	**1,741,250**
Net Capital Result	**(11,892,060)**	**87,580**	**(11,804,480)**	**(1,189,914)**
Funding				
New Loans				
Restricted Assets - transfers from	2,772,152	(5,975,000)	(9,177,848)	0
Rates & other untied funding	4,007,301	0	4,007,301	5,589,687
Adjust for Non-Cash Depreciation	3,708,916	0	3,708,916	927,229
Unrestricted Reserves - increase / (decrease)	**(1,403,691)**	**(5,887,420)**	**(13,266,111)**	
	Decrease	Decrease	Decrease	

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Sept Qtr Review - Major Variations

30 September 2024

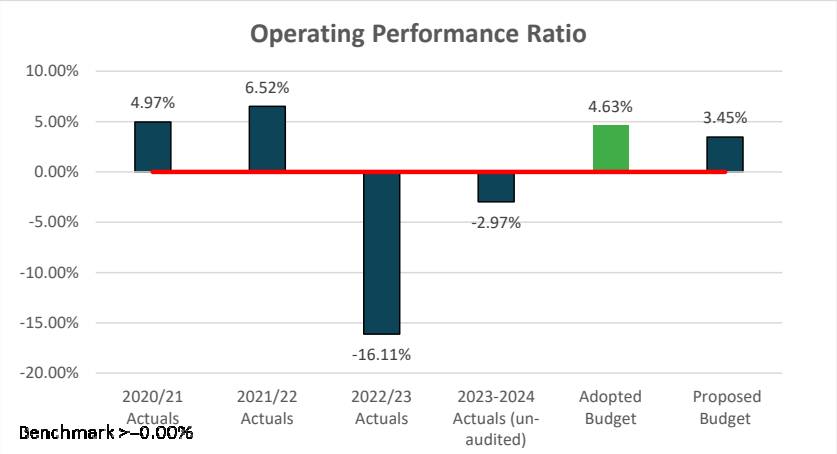
		OPERATIONAL		CAPITAL	
TYPE	**DETAILS**	**INCOME**	**EXPENDITURE**	**INCOME**	**EXPENDITURE**
Grant Income	Open Space & Recreation Study	300,000	300,000		
Grant Income	Orange Strategic Transport Model Update	250,000	250,000		
Grant Income	Aged Care Volunteer Visitors Scheme	108,601	108,601		
Liabilities	Short term loan and interest for the Orange Regional Conservatorium and Planetarium, utilised against existing ORCaP expenditure.		39,925	3,000,000	
Grant Income	Rebudgeting Orange Regional Conservatorium and Planetarium funding and timeframes			(8,000,000)	
Capital Expenditure	Fitting Machine gudance to new grader & excavator plus new total station. Funded from other plant purchase efficiencies.			229,318	229,318
Operational Income	Increase in operational income due to change of operating structure at the Ophir Road Resource Recovery Centre	199,309			
Operational Expenditure	Unscheduled maintenance for the fire at the Euchareena Road Resource Centre. Funded from Waste Service reserves.	104,335	104,335		
Operational Expenditure	Unanctipated increase of insurance premiums		202,025		
Operational Income	Unanticipated increase in rates due to additional properties	192,938			
Operational Expenditure	Annual maintenance of festoon lighting		50,000		
Operational Expenditure	Salary adjustments for Q1 for omissions in annual budget process		93,977		
Operational Income	BCT release of Council's outstanding annual management payments for the 2020-2023 period.	114,638			

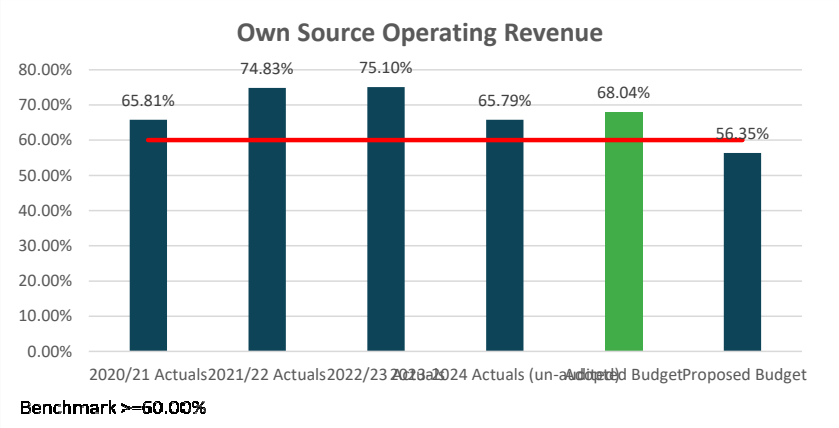
Sept Qtr Review - Cash Restrictions 30 September 2024

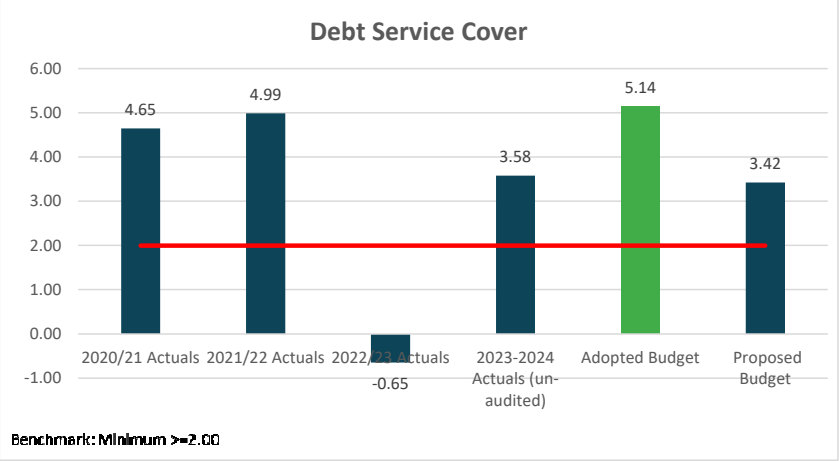
	Closing Balance 30 June 2024	Original Budget Transfers	Original Budget to End of Year	Q1 Revisions	Projected Balance 30 June 2024
Externally restricted					
Specific Purpose Unexpended Grants - General	1,167,917	0	1,167,917	0	1,167,917
Special Purpose Unexpended Loans - General	-	0	-	0	-
Specific Purpose Unexpended Grants - Water	-	0	-	0	-
Developer Contributions - General	15,091,701	1,411,954	16,503,655	(112,500)	16,391,155
Developer Contributions - Water	29,478,103	(17,631,952)	11,846,151	13,300,000	25,146,151
Developer Contributions - Sewer	15,189,445	(6,774,841)	8,414,604	5,745,000	14,159,604
Water Supplies	49,816,398	6,005,739	55,822,137	(820,000)	55,002,137
Sewerage Services	41,781,976	4,002,689	45,784,665	230,000	46,014,665
Domestic Waste Management	12,748,766	112,418	12,861,184	(104,335)	12,756,849
Stormwater Management	2,698,242	(1,819,351)	878,891	0	878,891
Total externally restricted	**167,972,548**	**(14,693,344)**	**153,279,204**	**18,238,165**	**171,517,369**
Internally restricted					
Plant and Vehicle Replacement	2,930,461	(1,627,278)	1,303,183	313,682	1,616,865
Infrastructure Replacement	295,089	49,404	344,493	0	344,493
Employees Leave Entitlements	3,468,018	0	3,468,018	0	3,468,018
Ageing / Disability Services	349,558	0	349,558	0	349,558
Airport Operations	1,520,609	524,985	2,045,594	0	2,045,594
Asset renewal / Capital Reserve	6,246,151	(342,026)	5,904,125	0	5,904,125
Children's Services	13,838	0	13,838	0	13,838
Heritage and Tourism promotion	59,868	0	59,868	0	59,868
Insurance Incentive Bonus	64,073	0	64,073	0	64,073
Land Development	6,500,637	8,406	6,509,043	0	6,509,043
Library	4,343	0	4,343	0	4,343
Parks / Sportgrounds / Recreation	40,209	0	40,209	0	40,209
Pool Redevelopment	181,981	0	181,981	0	181,981
Quarry Operation	137,537	(21,024)	116,513	0	116,513
Regional Art Gallery	22,139	1,854	23,993	0	23,993
Rural Fire Service	69,231	0	69,231	0	69,231
Community Safety	7,486	0	7,486	0	7,486
Election Expenses	295,000	(295,000)	-	0	-
Other	2,629,301	(6,985)	2,622,316	4,000	2,626,316
FAG in Advance	4,165,857	0	4,165,857	0	4,165,857
Carry Forward	7,765,722	(457,000)	7,308,722	1,040,826	8,349,548
Future Fund	4,994,815	0	4,994,815	0	4,994,815
Total internally restricted	**41,761,925**	**(2,164,664)**	**39,597,261**	**1,358,508**	**40,955,769**
Total Restricted Cash	**209,734,473**	**(16,858,008)**	**192,876,465**	**19,596,673**	**212,473,138**
Actual Unrestricted cash (un-audited)	**2,553,000**		2,553,000		-
Estimated Unrestricted Cash					**38,276,368**
Estimated Cash at Year End					**250,749,506**
Actual Total Cash and Investments	**242,522,350**			**248,010,841**	
	30/06/2024			30/09/2024	

Sept Qtr Review - Performance Ratios

30 September 2024







Sept Qtr Review - Contracts & Other Expenses **30 September 2024**

Ref	Contractor	Contract Start Date	Contract End Date	Contract Description	Contract Estimated Total $ GST INCL
1	Sims Group Australia Holdings Limited t/a Sims Metal	1-Sep-21	31-Aug-23 plus 2 x 12 months terms	Collection and Recycling Scrap Metal	Schedule of Rates paid to Council
2	Skilltech Consulting Services Pty Ltd	28-Jun-22	27-Jun-2025 plus 1 x 2 year option	Provision of water meter readings	Schedule of Rates (Total: 750,505)
3	TDO Pty Limited trading as Orange 360	20-Oct-22	30-Jun-25	Provision of Destination Marketing Services	1,485,000
4	MAAS Civil Pty Ltd	6-Mar-23	11-Apr-24	Construction of Southern Feeder Road Stage 4 and Shiralee Collector Road Stage 5	10,378,343
5	Telstra	9-Mar-23	8-Mar-25	LGP Mobile Phone Contract and Bluewater Management Implementation 2022	277,082
6	Boral Resources (Country) Pty Ltd	25-Jul-23	30-Jun-25	Panel Contract - Supply of Road base and other Quarry Products	Schedule of Rates
7	CPB Excavations	25-Jul-23	30-Jun-25	Panel Contract - Supply of Road base and other Quarry Products	Schedule of Rates
8	Hanson Construction Materials	25-Jul-23	30-Jun-25	Panel Contract - Supply of Road base and other Quarry Products	Schedule of Rates
9	Charlmont Gravel Pty Ltd t/as Central West Gravel	25-Jul-23	30-Jun-25	Panel Contract - Supply of Road base and other Quarry Products	Schedule of Rates
10	Westlime Canowindra Pty Ltd	25-Jul-23	30-Jun-25	Panel Contract - Supply of Road base and other Quarry Products	Schedule of Rates
11	Regional Quarries Australia	25-Jul-23	30-Jun-25	Panel Contract - Supply of Road base and other Quarry Products	Schedule of Rates
12	G R Spurr Concreting Pty Ltd	21-Jul-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
13	Ace Concreting Central West	25-Jul-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
14	Royall Building Construction and Contracting	26-Jul-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
15	Matt Foley Concreting	25-Jul-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
16	Will Concrete	1-Aug-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
17	FB Concreting Pty Ltd	1-Aug-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
18	Spencers Landscape Construction and Contracting Pty Ltd	24-Aug-23	30-Jun-25	Panel Contract - concrete civil works (Footpaths, Kerb & Gutter) 2023-2025	Schedule of Rates
19	Barnes Prestige Pty Ltd	1-Sep-23	31-Aug-26 Plus 3 year option	Maintenance of public open space	2,040,000
20	Boral Resources (NSW) Pty Ltd	12-Sep-23	30-Jun-25	Panel Contract - Supply of ready mix concrete	Schedule of Rates
21	Holcim (Australia) Pty Ltd	12-Sep-23	30-Jun-25	Panel Contract - Supply of ready mix concrete	Schedule of Rates
22	Zamoraft Pty Ltd t/as Midwestern Mini Mix	12-Sep-23	30-Jun-25	Panel Contract - Supply of ready mix concrete	Schedule of Rates
23	Downer Edi Works Pty Ltd	14-Sep-23	2025	Southern Feeder Road Stage 4 - supply and lay asphalt	3,579,454
24	Platinum Traffic Services	18-Sep-23	31-Aug-24 with 2 x 1 year options	Panel Contract - Provision of Traffic Management Services	Schedule of Rates
25	Workcontrol Operations	17-Oct-23	31-Aug-24 with 2 x 1 year options	Panel Contract - Provision of Traffic Management Services	Schedule of Rates
26	Microsoft & Data#3	1-Nov-23	1-Nov-26	Microsoft Enterprise Agreement	1,290,000
27	Tucarma Pty Ltd	6-Nov-23	31-Oct-24 with 2 x 2 year options		

28	Large Industries Pty Limited t/as JLE Electrical	21-Nov-23	4-Apr-24	Detailed Design and Construct - Icely Road Water Treatment Plant (WTP) Generator and Main Switchboard Build	1,226,432
29	GEA Westfalia Separator Australia Pty Ltd	6-Dec-23	Completion of works	Supply of Centrifuge Equipment and Support Services for Orange Sewage Treatment Plant (STP) Centrifuge Replacement	193,803
30	Synergy Resource Management Pty Ltd	19-Dec-23	5-Aug-24	Euchareena Road Resource Recovery Centre Stage 4 Construction and Stages 1 and 2 Finishing works	3,615,243
31	Qmax Pumping Systems Pty Ltd	11-Jan-24	26-Jul-24	Design and construction Lake Canobolas Sewer Pump Station	1,535,325
32	Renascent Australia Pty Ltd	5-Feb-24	8-Aug-25	Construction of Orange Conservatorium and Planetarium	29,200,000
33	MDE Projects Pty Ltd	8-Mar-24	1/07/2024	Installation of Lake Canobolas Boardwalk	385,229
34	Creative Recreation Solutions Pty Ltd	18-Mar-24	18/10/2024	Design, supply and installation of playground – Anzac Park	172,448
35	Waeger Constructions Pty Ltd	16-Apr-24	N/A	Supply and install pedestrian bridge - Molong Road	291,500
36	Infrastructure Renewal Services Pty Ltd	17-May-24	20/08/2024	Sewer Mains Upgrade 2023/2024	1,286,803
37	Paramount Landscaping Pty Ltd (Daracon Landscaping)	20-May-24	9/12/2024	Orange Adventure Playground Upgrade	2,677,166
38	Johnson Controls Australia Pty Ltd	21-May-24	16/09/2024	Design and construction of the Orange Aquatic Centre 50 metre pool heating	424,314
39	DeNeefe Pty Ltd t/as DeNeefe Signs	21-May-24	31/12/2026 with 1 year option	Supply and Delivery of Road Signs	Schedule of Rates
40	Downer Edi Works Pty Ltd	4-Jun-24	N/A	Supply and lay Asphalt for Hill and Moulder Roundabout	265,030
41	State Asphalt Services Pty Ltd	5-Jun-24	30/06/2025	Provision of Spray Sealing Services 2024-25	Schedule of Rates
42	Never Stop Water Harvesting Pty Ltd	24-Jun-24	45 weeks	Orange Turf/Precinct Natural Turf Fields - Establish Training Fields 1-8	8,798,419
43	Barrier Signs Pty Ltd	28-Jun-24	31/12/2026 with 1 year option	Supply and Delivery of Road Signs	Schedule of Rates
44	Ixom Operations Pty Ltd	1-Jul-24	1/07/2026	Supply of Liquid Polyaluminium Chlorohydrate	324,000
45	JLW Services Pty Ltd	4-Jul-24	04-Jul-26 plus option of 2 x 1 year	Collection and Recycling of Used Tyres	Schedule of Rates
46	Western Safety Barriers Group Pty Ltd	18-Jul-24	30/04/2026	Supply, Delivery and/or Installation of Guardrail and Wire Rope Safety Fencing	Schedule of Rates
47	RBK Pty Ltd	18-Jul-24	30/04/2026	Supply, Delivery and/or Installation of Guardrail and Wire Rope Safety Fencing	Schedule of Rates
48	Williams Oriel Services Pty Ltd	23-Jul-24	23-Jul-26 plus 2 year option plus 1 year option	Provision of Heating, Ventilation & Air Conditioning (HVAC) Services	140,720
49	Wormald Australia Pty Ltd	23-Jul-24	23-Jul-26 plus 2 year option plus 1 year option	Provision of Fire Systems Maintenance Services	234,725
50	Precision Civil Infrastructure Pty Ltd	26-Jul-24	23 weeks from date of site possession	Remediation of Pines Lane C7 Stormwater Basin	630,629
51	Mode Design Corp. Pty Ltd	14-Aug-24	38 weeks	Design of football and athletics stadium including athletics track and all associated infrastructure	116,528,610
52	Department of Regional NSW (NSW Public Works)	5-Sep-24	30-June-29 plus 12-month option	Supply of Dam Surveillance and Inspection	204,482
53	Stabilcorp Pty Ltd	16-Sep-24	Completion of works - expected October 2024	Road Stabilisation Works 2024-2025	230,084
54	State Asphalt Services Pty Ltd	18-Sep-24	Completion of works - expected October 2024	Asphalt Surfacing for Road Stabilisation Works	334,046
55	JLW Services Pty Ltd	24-Sep-24	04-Jul-26 plus 2 x 1 year options	Collection and Recycling of Used Mattresses	Schedule of Rates

5.11 STATEMENT OF INVESTMENTS - AUGUST, SEPTEMBER, OCTOBER 2024

RECORD NUMBER: 2024/1684
AUTHOR: Claire Wright, Acting Chief Financial Officer

EXECUTIVE SUMMARY

The purpose of this report is to provide a statement of Council's investments held for the period August, September and October 2024.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "18.2. Ensure financial stability and support efficient ongoing operation".

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

Nil.

RECOMMENDATION

That Council resolves to:

1 Note the Statement of Investments for the period August, September & October 2024

2 Adopt the certification of the Responsible Accounting Officer.

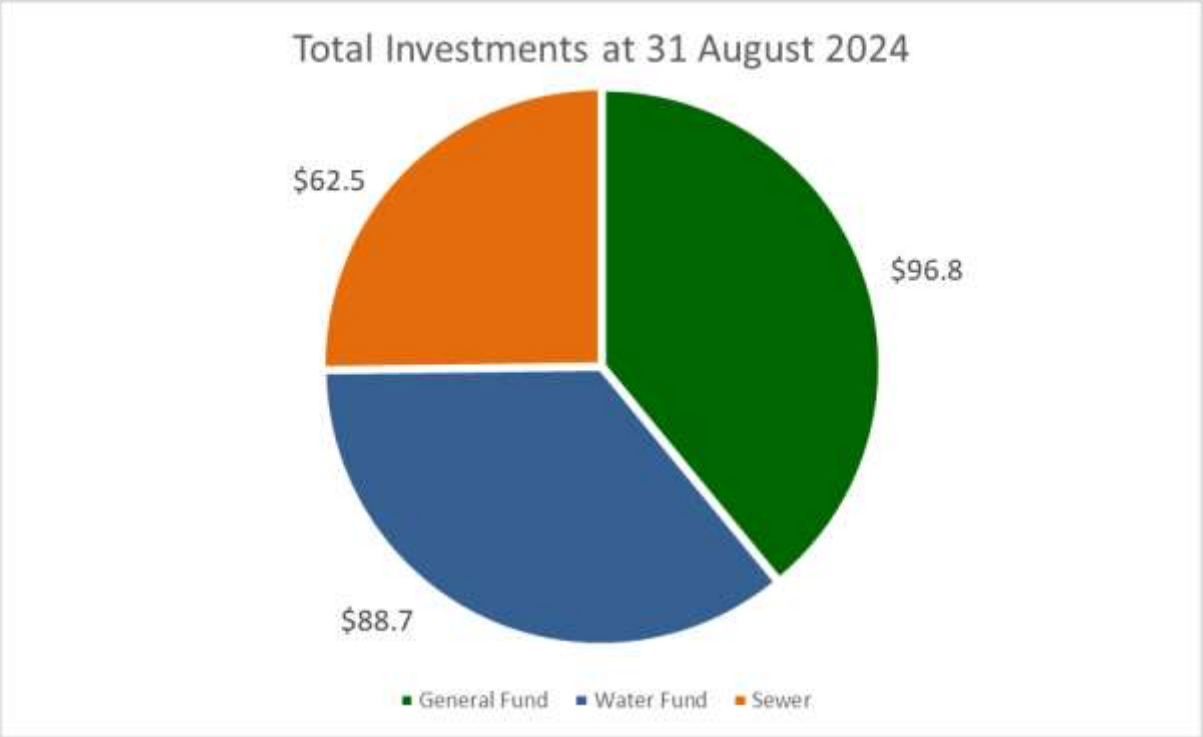
SUPPORTING INFORMATION

Statement of investments – 31 August 2024, 30 September 2024 and 31 October 2024

The investments held by Council in each fund is shown below across the three months:

	31/07/2024	31/08/2024	30/09/2024	31/10/2024
General Fund	93,370,331	96,846,152	92,915,955	89,491,514
Water Fund	88,175,383	88,657,623	89,697,710	91,804,726
Sewer Fund	64,071,204	62,507,065	65,529,013	66,527,343
Total Funds	**245,616,918**	**248,010,841**	**248,142,678**	**247,823,583**

Portfolio Performance



August 2024

As at the end of August 2024, Council's $248M investment portfolio remains largely secured through fixed rate term deposits (88%), with the remaining portfolio allocated to floating rate note (4%), bonds (1%) and cash (7%).

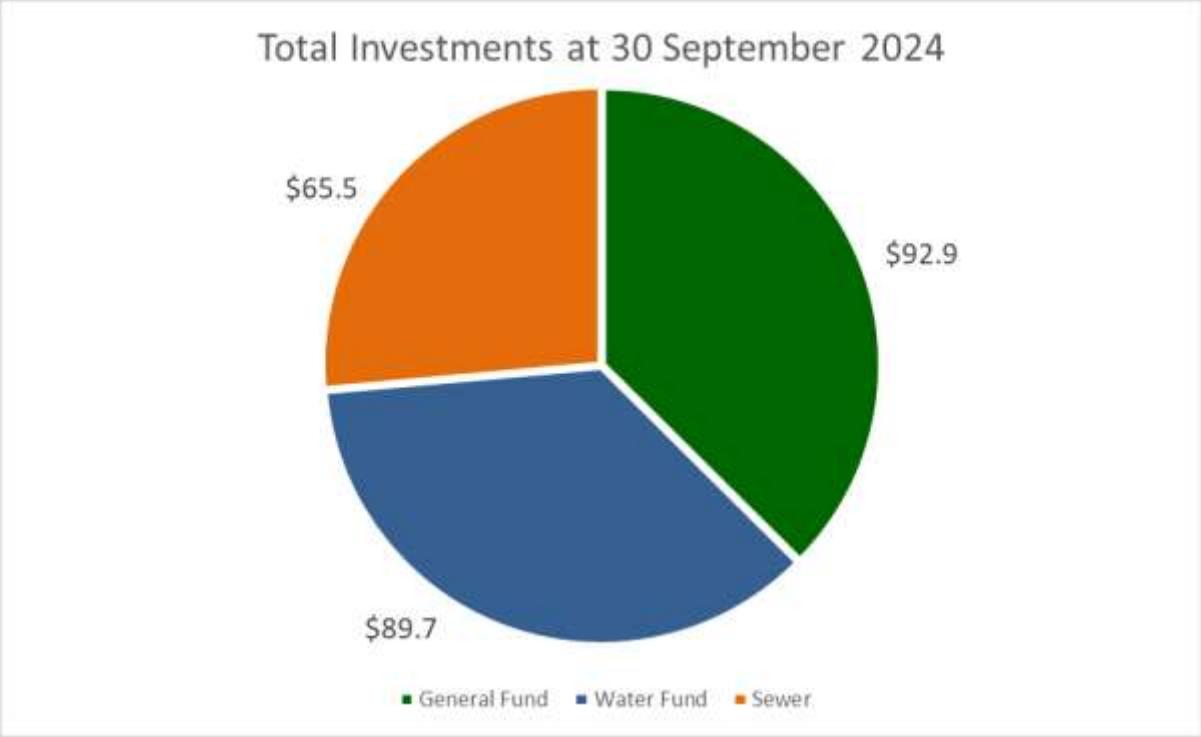
Overall Council's portfolio remains highly liquid and diversified with approximately 72.16% of assets maturing under 12 months and no exposure to the unrated ADI sector.

The weighted average interest rate of Council's investment portfolio for the period ending 31 August 2024 was 4.7 percent, which is below Council's target cash rate of 5.10 percent or 510 basis points (based on a target of 75 basis points above the cash rate for August 2024 at 4.35 percent).

Council acknowledges that it is currently not achieving its established target rate of return and will continue to monitor maturing investments to ensure these are rolled at an improved rate. Retiring investments are being monitored closely and reinvested to optimise returns in line with Council's investment policy.

A review of the current target benchmark will be progressed as part of the broader review of Council's Investment Policy as discussed and agreed at the 26 June 2024 Audit, Risk and Improvement Committee.

Council has also utilised the AusBond Bank Bill Index to provide a further benchmark focused on long term investments. For the period August 2024, the AusBond rate was 4.54 percent. The weighted average interest rate of Council's investment portfolio at the same reporting date was 4.7 percent. The AusBond rate is supplied to Council by our investment consultants Arlo Advisory Pty Ltd.



September 2024

As at the end of September 2024, Council's $248.1M investment portfolio remains largely secured through fixed rate term deposits (91%), with the remaining portfolio allocated to floating rate note (3%), bonds (1%) and cash (5%).

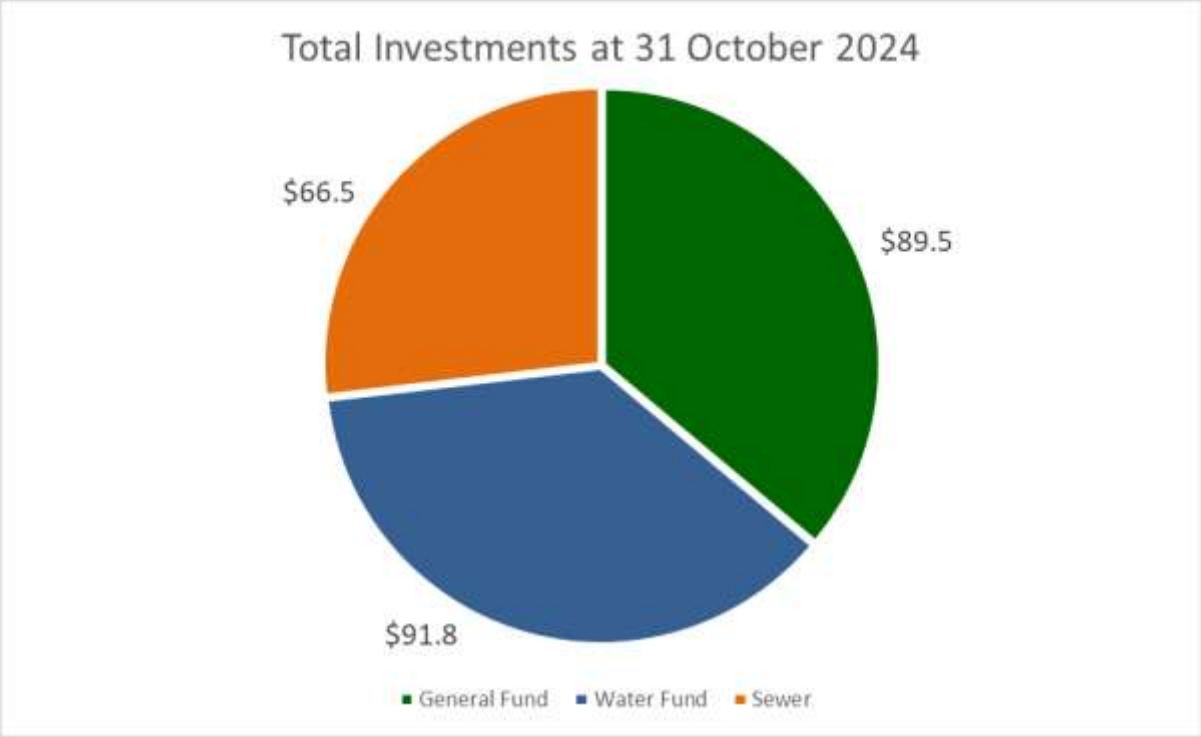
Overall Council's portfolio remains highly liquid and diversified with approximately 68.79% of assets maturing under 12 months and no exposure to the unrated ADI sector.

The weighted average interest rate of Council's investment portfolio for the period ending 30 September 2024 was 4.71 percent, which is below Council's target cash rate of 5.10 percent or 510 basis points (based on a target of 75 basis points above the cash rate for September 2024 at 4.35 percent).

Council acknowledges that it is currently not achieving its established target rate of return and will continue to monitor maturing investments to ensure these are rolled at an improved rate. Retiring investments are being monitored closely and reinvested to optimise returns in line with Council's investment policy.

A review of the current target benchmark will be progressed as part of the broader review of Council's Investment Policy as discussed and agreed at the 26 June 2024 Audit, Risk and Improvement Committee.

Council has also utilised the AusBond Bank Bill Index to provide a further benchmark focused on long term investments. For the period September 2024, the AusBond rate was 4.45 percent. The weighted average interest rate of Council's investment portfolio at the same reporting date was 4.71 percent. The AusBond rate is supplied to Council by our investment consultants Arlo Advisory Pty Ltd.



October 2024

As at the end of October 2024, Council's $247.8M investment portfolio remains largely secured through fixed rate term deposits (89%), with the remaining portfolio allocated to floating rate note (3%), bonds (1%) and cash (7%).

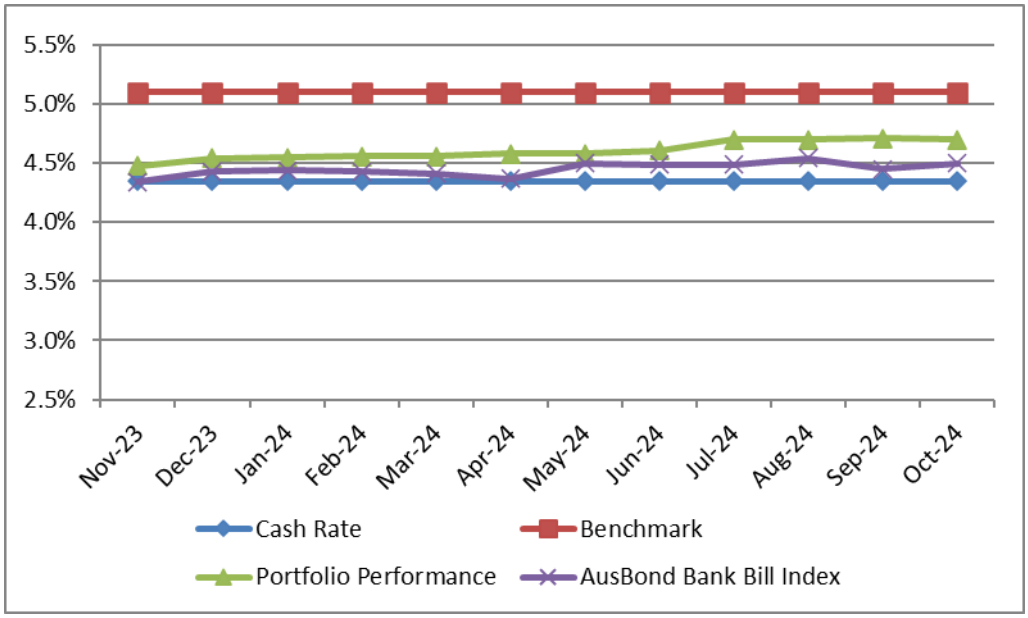
Overall Council's portfolio remains highly liquid and diversified with approximately 69% of assets maturing under 12 months and no exposure to the unrated ADI sector.

The weighted average interest rate of Council's investment portfolio for the period ending 31 October 2024 was 4.7 percent, which is below Council's target cash rate of 5.10 percent or 510 basis points (based on a target of 75 basis points above the cash rate for October 2024 at 4.35 percent).

Council acknowledges that it is currently not achieving its established target rate of return and will continue to monitor maturing investments to ensure these are rolled at an improved rate. Retiring investments are being monitored closely and reinvested to optimise returns in line with Council's investment policy.

A review of the current target benchmark will be progressed as part of the broader review of Council's Investment Policy as discussed and agreed at the 26 June 2024 Audit, Risk and Improvement Committee.

Council has also utilised the AusBond Bank Bill Index to provide a further benchmark focused on long term investments. For the period October 2024, the AusBond rate was 4.50 percent. The weighted average interest rate of Council's investment portfolio at the same reporting date was 4.7 percent. The AusBond rate is supplied to Council by our investment consultants Arlo Advisory Pty Ltd.



Council's Investment Policy establishes limits in relation to the maturity terms of Council's investments as well as the credit ratings of the institutions with whom Council can invest.

The following tables provide a dissection of Council's investment portfolio as required by the Policy. The Policy identifies the maximum amount that can be held in a variety of investment products or with institutions based on their respective credit ratings.

Table 1-3 shows the percentage held by Council (holdings) and the additional amount that Council could hold (capacity) for each term to maturity allocation in accordance with limits established by Council's Policy for each of the three months of this report.

Table 1: Maturity – term limits – August 2024

Term to Maturity Allocation	Maximum	Holdings	Capacity
0 - 3 Months	100.00%	26.94%	73.06%
3 - 12 Months	100.00%	45.22%	54.78%
1 - 2 Years	70.00%	15.73%	54.27%
2 - 5 Years	50.00%	12.11%	37.89%
5+ Years	25.00%	0.00%	25.00%

Table 2: Maturity – term limits – September 2024

Term to Maturity Allocation	Maximum	Holdings	Capacity
0 - 3 Months	100.00%	28.84%	71.16%
3 - 12 Months	100.00%	39.96%	60.04%
1 - 2 Years	70.00%	16.12%	53.88%
2 - 5 Years	50.00%	15.09%	34.91%
5+ Years	25.00%	0.00%	25.00%

Table 3: Maturity – term limits – October 2024

Term to Maturity Allocation	Maximum	Holdings	Capacity
0 - 3 Months	100.00%	29.56%	70.44%
3 - 12 Months	100.00%	39.20%	60.80%
1 - 2 Years	70.00%	19.57%	50.43%
2 - 5 Years	50.00%	11.67%	38.33%
5+ Years	25.00%	0.00%	25.00%

Table 4-6 shows the total amount held, and the weighted average interest rate (or return on investment), by credit rating. The credit rating is an independent opinion of the capability and willingness of a financial institution to repay its debts, or in other words, the providers' financial strength or creditworthiness. The rating is typically calculated as the likelihood of a failure occurring over a given period, with the higher rating (AAA) being superior due to having a lower chance of default. However, it is generally accepted that this lower risk will be accompanied by a lower return on investment.

The level of money held in the bank accounts has been added to the table to illustrate the ability of Council to cover the operational liabilities that typically occur (for example payroll, materials and contracts, utilities).

Table 4: Credit rating limits – August 2024

Credit Rating	Maximum	Holding	Remaining Capacity	Value	Return on investment
Bank Accounts	100.00%	6.78%	93.22%	16,810,461.93	4.35%
AAA	100.00%	0.40%	99.60%	1,003,013.00	4.50%
AA	100.00%	56.22%	43.78%	139,442,190.90	4.54%
A	60.00%	23.81%	36.19%	59,055,116.00	4.88%
BBB & NR	40.00%	12.78%	27.22%	31,700,059.10	5.15%
Below BBB	0.00%	0.00%	0.00%	0.00	0.00%

Table 5: Credit rating limits – September 2024

Credit Rating	Maximum	Holding	Remaining Capacity	Value	Return on investment
Bank Accounts	100.00%	4.66%	95.34%	11,555,884.98	4.35%
AAA	100.00%	0.40%	99.60%	1,004,606.00	4.50%
AA	100.00%	54.98%	45.02%	136,427,715.30	4.52%
A	60.00%	26.22%	33.78%	65,052,159.80	4.87%
BBB & NR	40.00%	13.74%	26.26%	34,102,311.60	5.20%
Below BBB	0.00%	0.00%	0.00%	0.00	0.00%

Table 6: Credit rating limits – October 2024

Credit Rating	Maximum	Holding	Remaining Capacity	Value	Return on investment
Bank Accounts	100.00%	6.96%	93.04%	17,245,856.92	4.35%
AAA	100.00%	0.40%	99.60%	993,346.00	4.50%
AA	100.00%	55.05%	44.95%	136,421,575.50	4.52%
A	60.00%	24.23%	35.77%	60,055,828.40	4.87%
BBB & NR	40.00%	13.36%	26.64%	33,106,975.80	5.21%
Below BBB	0.00%	0.00%	0.00%	0.00	0.00%

It is noted that Council still holds several lower interest rate investments with significant costs to redeem early and impacting Council's expected interest income. These investments are continuing to be monitored closely with the intention to be redeemed at maturity and reinvested into higher performing products.

Portfolio advice

Council utilises the services of an independent investment advisor in maintaining its portfolio of investments. Council's current investment advisor is Arlo Advisory Pty Ltd. Services provided to Council currently include:

- quarterly portfolio summary reports;
- advice on investment opportunities, in particular Floating Rate Note products;
- advice on policy construction; and
- year-end market values for Floating Rate Note products held by Council.

Certification by Responsible Accounting Officer

Section 212(1) of the Local Government (General) Regulation 2021 requires that a written report be presented each month at an Ordinary Meeting of the Council detailing all money that Council has invested under *Section 625 of the Local Government Act 1993*.

I, Claire Wright, hereby certify that all investments have been made in accordance with Section 625 of the *Local Government Act 1993*, Clause 212 of the *Local Government (General) Regulation 2021* and Council's Investment Policy.

ATTACHMENTS

1 Monthly Investment Report August 2024, D24/124442⇩
2 Monthly Investment Report September 2024, D24/124440⇩
3 Monthly Investment Report October 2024, D24/124439⇩

Investment Report

01/08/2024 to 31/08/2024

ORANGE CITY COUNCIL

Portfolio Valuation as at 31/08/2024

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Bendigo and Adelaide	BBB+	FRN	SEWER	Quarterly	05/09/2019	06/09/2024	5.3158	999,567.00	1,000,000.00	12,670.54	4,514.79
NAB	AA-	TD	GENERAL	At Maturity	07/09/2023	12/09/2024	5.2300	2,000,000.00	2,000,000.00	103,167.12	8,883.84
BOQ	A-	TD	WATER	At Maturity	11/04/2024	17/10/2024	5.1000	5,000,000.00	5,000,000.00	99,904.11	21,657.53
Police Bank	BBB+	TD	WATER	Annual	14/10/2022	17/10/2024	4.7500	1,000,000.00	1,000,000.00	41,773.97	4,034.25
Defence Bank	BBB+	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	3,000,000.00	3,000,000.00	129,904.11	13,886.30
Suncorp Bank	AA-	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	216,506.85	23,143.84
Suncorp Bank	AA-	TD	SEWER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	216,506.85	23,143.84
Citibank, N.A.	A+	FRN	SEWER	Quarterly	14/11/2019	14/11/2024	5.2363	1,000,345.00	1,000,000.00	2,582.28	2,582.28
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	5,000,000.00	5,000,000.00	213,726.03	22,846.58
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	64,117.81	6,853.97
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	1,000,000.00	1,000,000.00	42,745.21	4,569.32
Commonwealth Bank	AA-	TD	WATER	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	64,117.81	6,853.97
Westpac	AA-	TD	GENERAL	At Maturity	23/11/2023	27/11/2024	5.4600	5,000,000.00	5,000,000.00	211,668.49	23,186.30
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	3,000,000.00	3,000,000.00	124,767.12	14,013.70
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	2,000,000.00	2,000,000.00	83,178.08	9,342.47
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.2900	5,000,000.00	5,000,000.00	200,005.48	22,464.38

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Suncorp Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.4600	3,000,000.00	3,000,000.00	123,859.73	13,911.78
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	05/12/2024	1.6000	3,000,000.00	3,000,000.00	11,835.62	4,076.71
Westpac	AA-	TD	GENERAL	Quarterly	21/12/2023	19/12/2024	5.0400	5,000,000.00	5,000,000.00	49,709.59	21,402.74
Suncorp Bank	AA-	TD	WATER	Quarterly	21/12/2023	19/12/2024	5.1500	5,000,000.00	5,000,000.00	50,794.52	21,869.86
Newcastle Greater Mutual Group Ltd	BBB+	FRN	WATER	Quarterly	05/02/2020	04/02/2025	5.4742	350,246.05	350,000.00	1,364.80	1,364.80
Newcastle Greater Mutual Group Ltd	BBB+	FRN	SEWER	Quarterly	05/02/2020	04/02/2025	5.4742	350,246.05	350,000.00	1,364.80	1,364.80
Macquarie Bank	A+	FRN	SEWER	Quarterly	12/02/2020	12/02/2025	5.2129	2,003,016.00	2,000,000.00	5,712.77	5,712.77
Commonwealth Bank	AA-	TD	SEWER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,260.38	630.19
Commonwealth Bank	AA-	TD	WATER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,260.38	630.19
Westpac	AA-	TD	WATER - GREEN TD	At Maturity	15/02/2024	20/02/2025	5.1900	5,000,000.00	5,000,000.00	141,480.82	22,039.73
ING Bank (Australia) Ltd	A	TD	GENERAL	Quarterly	17/02/2022	20/02/2025	2.5800	2,250,000.00	2,250,000.00	2,067.53	2,067.53
Westpac	AA-	TD	WATER	Quarterly	02/03/2023	03/03/2025	4.9500	3,000,000.00	3,000,000.00	36,616.44	12,612.33
Defence Bank	BBB+	TD	GENERAL	At Maturity	07/03/2024	06/03/2025	5.1200	5,000,000.00	5,000,000.00	124,843.84	21,742.47
Westpac	AA-	TD	SEWER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	11,750.96	4,187.12
Westpac	AA-	TD	WATER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	11,750.96	4,187.12
Westpac	AA-	TD	GENERAL	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	11,750.96	4,187.12
Defence Bank	BBB+	TD	SEWER	Annual	16/03/2023	20/03/2025	4.6000	4,000,000.00	4,000,000.00	84,186.30	15,627.40

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	21/03/2024	20/03/2025	5.0000	2,500,000.00	2,500,000.00	24,657.53	10,616.44
ING Bank (Australia) Ltd	A	TD	WATER	Annual	19/03/2020	20/03/2025	1.7800	2,000,000.00	2,000,000.00	16,190.68	3,023.56
NAB	AA-	TD	WATER	At Maturity	21/03/2024	20/03/2025	5.0100	2,000,000.00	2,000,000.00	45,021.37	8,510.14
NAB	AA-	TD	SEWER	At Maturity	21/03/2024	20/03/2025	5.0100	1,500,000.00	1,500,000.00	33,766.03	6,382.60
NAB	AA-	TD	SEWER	Quarterly	31/03/2022	03/04/2025	2.9500	3,500,000.00	3,500,000.00	18,386.99	8,769.18
NAB	AA-	TD	WATER	Quarterly	31/03/2022	03/04/2025	2.9500	1,500,000.00	1,500,000.00	7,880.14	3,758.22
BOQ	A-	TD	WATER	Annual	26/04/2024	01/05/2025	5.0000	2,500,000.00	2,500,000.00	43,835.62	10,616.44
JUDO BANK	BBB	TD	WATER	At Maturity	23/05/2024	22/05/2025	5.3000	1,000,000.00	1,000,000.00	14,665.75	4,501.37
JUDO BANK	BBB	TD	SEWER	Annual	23/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	14,665.75	4,501.37
MyState Bank	BBB	TD	SEWER	At Maturity	30/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	13,649.32	4,501.37
MyState Bank	BBB	TD	WATER	Annual	30/05/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	13,649.32	4,501.37
P&N Bank	BBB+	TD	GENERAL	At Maturity	06/06/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	12,632.88	4,501.37
Rabobank Australia Limited	A	TD	GENERAL	Annual	06/06/2024	12/06/2025	5.3200	1,000,000.00	1,000,000.00	12,680.55	4,518.36
NAB	AA-	TD	WATER	At Maturity	28/06/2024	19/06/2025	5.5000	4,000,000.00	4,000,000.00	39,178.08	18,684.93
NAB	AA-	TD	SEWER	At Maturity	28/06/2024	19/06/2025	5.5000	3,000,000.00	3,000,000.00	29,383.56	14,013.70
Rabobank Australia Limited	A	TD	WATER	Annual	06/06/2024	19/06/2025	5.3200	1,000,000.00	1,000,000.00	12,680.55	4,518.36
NAB	AA-	TD	GENERAL	At Maturity	04/07/2024	26/06/2025	5.4300	5,000,000.00	5,000,000.00	43,886.30	23,058.90
Rabobank Australia Limited	A	TD	SEWER	Annual	06/06/2024	26/06/2025	5.3200	1,000,000.00	1,000,000.00	12,680.55	4,518.36

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	TD	SEWER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	44,047.95	23,143.84
NAB	AA-	TD	WATER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	44,047.95	23,143.84
Rabobank Australia Limited	A	TD	GENERAL	Annual	01/07/2024	03/07/2025	5.4600	5,000,000.00	5,000,000.00	46,372.60	23,186.30
Rabobank Australia Limited	A	TD	WATER	At Maturity	18/07/2024	17/07/2025	5.3300	2,000,000.00	2,000,000.00	13,142.47	9,053.70
NAB	AA-	TD	WATER	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	15,386.30	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	15,386.30	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	25/07/2024	24/07/2025	5.3500	3,000,000.00	3,000,000.00	16,709.59	13,631.51
Rabobank Australia Limited	A	TD	GENERAL	Annual	18/07/2024	24/07/2025	5.3300	3,000,000.00	3,000,000.00	19,713.70	13,580.55
NAB	AA-	TD	SEWER	At Maturity	18/07/2024	31/07/2025	5.3000	3,000,000.00	3,000,000.00	19,602.74	13,504.11
NAB	AA-	TD	SEWER	At Maturity	25/07/2024	31/07/2025	5.3500	2,000,000.00	2,000,000.00	11,139.73	9,087.67
NAB	AA-	TD	GENERAL	Annual	02/08/2024	07/08/2025	5.0500	2,000,000.00	2,000,000.00	8,301.37	8,301.37
NAB	AA-	TD	GENERAL	Annual	02/08/2024	14/08/2025	5.2000	2,000,000.00	2,000,000.00	8,547.95	8,547.95
NAB	AA-	TD	WATER	Annual	02/08/2024	28/08/2025	5.2000	2,000,000.00	2,000,000.00	8,547.95	8,547.95
Westpac	AA-	TD	WATER	Quarterly	25/11/2021	27/11/2025	1.9400	2,000,000.00	2,000,000.00	637.81	637.81
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	14/12/2023	11/12/2025	5.2000	4,500,000.00	4,500,000.00	167,967.12	19,873.97
ING Bank (Australia) Ltd	A	TD	WATER	Annual	14/12/2023	11/12/2025	5.2000	2,500,000.00	2,500,000.00	93,315.07	11,041.10
ING Bank (Australia) Ltd	A	TD	GENERAL	Annual	14/12/2023	11/12/2025	5.2000	3,000,000.00	3,000,000.00	111,978.08	13,249.32

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ING Bank (Australia) Ltd	A	TD	WATER	Quarterly	16/12/2022	18/12/2025	4.7000	5,000,000.00	5,000,000.00	48,931.51	19,958.90
ING Bank (Australia) Ltd	A	TD	GENERAL	At Maturity	21/12/2023	18/12/2025	5.0800	3,500,000.00	3,500,000.00	124,216.44	15,100.82
Commonwealth Bank	AA-	FRN	WATER	Quarterly	13/01/2023	13/01/2026	5.3533	3,017,448.00	3,000,000.00	21,119.87	13,639.92
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	11/01/2024	15/01/2026	4.9600	3,000,000.00	3,000,000.00	95,395.07	12,637.81
Westpac	AA-	TD	SEWER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	1,178.08	1,178.08
Westpac	AA-	TD	WATER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	1,178.08	1,178.08
Westpac	AA-	TD	GENERAL	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	1,178.08	1,178.08
Westpac	AA-	TD	WATER	Quarterly	04/03/2021	05/03/2026	1.2000	1,500,000.00	1,500,000.00	4,389.04	1,528.77
Westpac	AA-	TD	SEWER	Quarterly	04/03/2021	05/03/2026	1.2000	1,000,000.00	1,000,000.00	2,926.03	1,019.18
P&N Bank	BBB+	TD	WATER	Quarterly	16/03/2023	19/03/2026	4.7000	5,000,000.00	5,000,000.00	48,931.51	19,958.90
P&N Bank	BBB+	TD	WATER	Quarterly	13/07/2023	16/07/2026	5.7500	2,000,000.00	2,000,000.00	15,123.29	9,767.12
Westpac	AA-	TD	GENERAL	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	1,658.08	1,511.78
Westpac	AA-	TD	SEWER	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	1,658.08	1,511.78
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	2,000,000.00	2,000,000.00	3,316.16	3,023.56
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	4,500,000.00	4,500,000.00	7,461.37	6,803.01
Westpac	AA-	TD	WATER	Quarterly	02/12/2021	03/12/2026	2.0000	1,000,000.00	1,000,000.00	4,931.51	1,698.63
Westpac	AA-	TD	SEWER	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	9,863.01	3,397.26
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	9,863.01	3,397.26

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	25/01/2024	28/01/2027	4.8400	1,000,000.00	1,000,000.00	5,038.90	4,110.68
NAB	AA-	TD	SEWER	Quarterly	10/02/2022	09/02/2027	2.3500	1,000,000.00	1,000,000.00	1,287.67	1,287.67
Westpac	AA-	TD	SEWER	Semi-Annual	15/02/2024	18/02/2027	4.8700	1,340,000.00	1,340,000.00	3,039.41	3,039.41
NAB	AA-	BOND	WATER	Semi-Annual	25/02/2022	25/02/2027	2.9000	434,581.20	450,000.00	214.52	214.52
NAB	AA-	BOND	SEWER	Semi-Annual	25/02/2022	25/02/2027	2.9000	434,581.20	450,000.00	214.52	214.52
Royal Bank of Canada	AAA	BOND	WATER	Semi-Annual	13/07/2022	13/07/2027	4.5000	1,003,013.00	1,000,000.00	5,917.81	3,821.92
ANZ Bank	AA-	FRN	SEWER	Quarterly	31/03/2023	31/03/2028	5.5053	1,515,580.50	1,500,000.00	14,705.94	7,013.60
ING Bank (Australia) Ltd	A	FRN	GENERAL	Quarterly	20/08/2024	20/08/2029	5.3885	1,801,755.00	1,800,000.00	3,188.81	3,188.81
Rabobank Australia Limited	A	TD	GENERAL	Annual	22/08/2024	29/08/2029	4.8500	5,000,000.00	5,000,000.00	6,643.84	6,643.84
Rabobank Australia Limited	A	TD	GENERAL	Annual	29/08/2024	30/08/2029	4.8500	3,000,000.00	3,000,000.00	1,195.89	1,195.89
Commonwealth Bank	AA-	CASH	WATER	Monthly	31/08/2024	31/08/2024	4.3500	3,002,334.94	3,002,334.94	9,391.02	9,391.02
Commonwealth Bank	AA-	CASH	SEWER	Monthly	31/08/2024	31/08/2024	4.3500	4,013,729.67	4,013,729.67	13,267.02	13,267.02
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	31/08/2024	31/08/2024	4.3500	9,794,397.32	9,794,397.32	26,624.90	26,624.90
TOTALS								**248,010,840.93**	**248,000,461.93**	**4,047,336.35**	**928,466.97**

Portfolio by Asset as at 31/08/2024

Asset Type: CASH

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Commonwealth Bank	AA-	CASH	WATER	Monthly	31/08/2024	31/08/2024	4.3500	3,002,334.94	3,002,334.94	9,391.02	9,391.02
Commonwealth Bank	AA-	CASH	SEWER	Monthly	31/08/2024	31/08/2024	4.3500	4,013,729.67	4,013,729.67	13,267.02	13,267.02
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	31/08/2024	31/08/2024	4.3500	9,794,397.32	9,794,397.32	26,624.90	26,624.90
CASH SUBTOTALS								**16,810,461.93**	**16,810,461.93**	**49,282.94**	**49,282.94**

Asset Type: TD

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	TD	GENERAL	At Maturity	07/09/2023	12/09/2024	5.2300	2,000,000.00	2,000,000.00	103,167.12	8,883.84
BOQ	A-	TD	WATER	At Maturity	11/04/2024	17/10/2024	5.1000	5,000,000.00	5,000,000.00	99,904.11	21,657.53
Police Bank	BBB+	TD	WATER	Annual	14/10/2022	17/10/2024	4.7500	1,000,000.00	1,000,000.00	41,773.97	4,034.25
Defence Bank	BBB+	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	3,000,000.00	3,000,000.00	129,904.11	13,886.30
Suncorp Bank	AA-	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	216,506.85	23,143.84
Suncorp Bank	AA-	TD	SEWER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	216,506.85	23,143.84
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	5,000,000.00	5,000,000.00	213,726.03	22,846.58
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	64,117.81	6,853.97

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	1,000,000.00	1,000,000.00	42,745.21	4,569.32
Commonwealth Bank	AA-	TD	WATER	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	64,117.81	6,853.97
Westpac	AA-	TD	GENERAL	At Maturity	23/11/2023	27/11/2024	5.4600	5,000,000.00	5,000,000.00	211,668.49	23,186.30
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	3,000,000.00	3,000,000.00	124,767.12	14,013.70
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	2,000,000.00	2,000,000.00	83,178.08	9,342.47
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.2900	5,000,000.00	5,000,000.00	200,005.48	22,464.38
Suncorp Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.4600	3,000,000.00	3,000,000.00	123,859.73	13,911.78
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	05/12/2024	1.6000	3,000,000.00	3,000,000.00	11,835.62	4,076.71
Westpac	AA-	TD	GENERAL	Quarterly	21/12/2023	19/12/2024	5.0400	5,000,000.00	5,000,000.00	49,709.59	21,402.74
Suncorp Bank	AA-	TD	WATER	Quarterly	21/12/2023	19/12/2024	5.1500	5,000,000.00	5,000,000.00	50,794.52	21,869.86
Commonwealth Bank	AA-	TD	SEWER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,260.38	630.19
Commonwealth Bank	AA-	TD	WATER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,260.38	630.19
Westpac	AA-	TD	WATER - GREEN TD	At Maturity	15/02/2024	20/02/2025	5.1900	5,000,000.00	5,000,000.00	141,480.82	22,039.73
ING Bank (Australia) Ltd	A	TD	GENERAL	Quarterly	17/02/2022	20/02/2025	2.5800	2,250,000.00	2,250,000.00	2,067.53	2,067.53
Westpac	AA-	TD	WATER	Quarterly	02/03/2023	03/03/2025	4.9500	3,000,000.00	3,000,000.00	36,616.44	12,612.33
Defence Bank	BBB+	TD	GENERAL	At Maturity	07/03/2024	06/03/2025	5.1200	5,000,000.00	5,000,000.00	124,843.84	21,742.47
Westpac	AA-	TD	SEWER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	11,750.96	4,187.12

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	11,750.96	4,187.12
Westpac	AA-	TD	GENERAL	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	11,750.96	4,187.12
Defence Bank	BBB+	TD	SEWER	Annual	16/03/2023	20/03/2025	4.6000	4,000,000.00	4,000,000.00	84,186.30	15,627.40
Westpac	AA-	TD	WATER	Quarterly	21/03/2024	20/03/2025	5.0000	2,500,000.00	2,500,000.00	24,657.53	10,616.44
ING Bank (Australia) Ltd	A	TD	WATER	Annual	19/03/2020	20/03/2025	1.7800	2,000,000.00	2,000,000.00	16,190.68	3,023.56
NAB	AA-	TD	WATER	At Maturity	21/03/2024	20/03/2025	5.0100	2,000,000.00	2,000,000.00	45,021.37	8,510.14
NAB	AA-	TD	SEWER	At Maturity	21/03/2024	20/03/2025	5.0100	1,500,000.00	1,500,000.00	33,766.03	6,382.60
NAB	AA-	TD	SEWER	Quarterly	31/03/2022	03/04/2025	2.9500	3,500,000.00	3,500,000.00	18,386.99	8,769.18
NAB	AA-	TD	WATER	Quarterly	31/03/2022	03/04/2025	2.9500	1,500,000.00	1,500,000.00	7,880.14	3,758.22
BOQ	A-	TD	WATER	Annual	26/04/2024	01/05/2025	5.0000	2,500,000.00	2,500,000.00	43,835.62	10,616.44
JUDO BANK	BBB	TD	WATER	At Maturity	23/05/2024	22/05/2025	5.3000	1,000,000.00	1,000,000.00	14,665.75	4,501.37
JUDO BANK	BBB	TD	SEWER	Annual	23/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	14,665.75	4,501.37
MyState Bank	BBB	TD	SEWER	At Maturity	30/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	13,649.32	4,501.37
MyState Bank	BBB	TD	WATER	Annual	30/05/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	13,649.32	4,501.37
P&N Bank	BBB+	TD	GENERAL	At Maturity	06/06/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	12,632.88	4,501.37
Rabobank Australia Limited	A	TD	GENERAL	Annual	06/06/2024	12/06/2025	5.3200	1,000,000.00	1,000,000.00	12,680.55	4,518.36
NAB	AA-	TD	WATER	At Maturity	28/06/2024	19/06/2025	5.5000	4,000,000.00	4,000,000.00	39,178.08	18,684.93
NAB	AA-	TD	SEWER	At Maturity	28/06/2024	19/06/2025	5.5000	3,000,000.00	3,000,000.00	29,383.56	14,013.70
Rabobank Australia	A	TD	WATER	Annual	06/06/2024	19/06/2025	5.3200	1,000,000.00	1,000,000.00	12,680.55	4,518.36

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Limited											
NAB	AA-	TD	GENERAL	At Maturity	04/07/2024	26/06/2025	5.4300	5,000,000.00	5,000,000.00	43,886.30	23,058.90
Rabobank Australia Limited	A	TD	SEWER	Annual	06/06/2024	26/06/2025	5.3200	1,000,000.00	1,000,000.00	12,680.55	4,518.36
NAB	AA-	TD	SEWER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	44,047.95	23,143.84
NAB	AA-	TD	WATER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	44,047.95	23,143.84
Rabobank Australia Limited	A	TD	GENERAL	Annual	01/07/2024	03/07/2025	5.4600	5,000,000.00	5,000,000.00	46,372.60	23,186.30
Rabobank Australia Limited	A	TD	WATER	At Maturity	18/07/2024	17/07/2025	5.3300	2,000,000.00	2,000,000.00	13,142.47	9,053.70
NAB	AA-	TD	WATER	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	15,386.30	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	15,386.30	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	25/07/2024	24/07/2025	5.3500	3,000,000.00	3,000,000.00	16,709.59	13,631.51
Rabobank Australia Limited	A	TD	GENERAL	Annual	18/07/2024	24/07/2025	5.3300	3,000,000.00	3,000,000.00	19,713.70	13,580.55
NAB	AA-	TD	SEWER	At Maturity	18/07/2024	31/07/2025	5.3000	3,000,000.00	3,000,000.00	19,602.74	13,504.11
NAB	AA-	TD	SEWER	At Maturity	25/07/2024	31/07/2025	5.3500	2,000,000.00	2,000,000.00	11,139.73	9,087.67
NAB	AA-	TD	GENERAL	Annual	02/08/2024	07/08/2025	5.0500	2,000,000.00	2,000,000.00	8,301.37	8,301.37
NAB	AA-	TD	GENERAL	Annual	02/08/2024	14/08/2025	5.2000	2,000,000.00	2,000,000.00	8,547.95	8,547.95
NAB	AA-	TD	WATER	Annual	02/08/2024	28/08/2025	5.2000	2,000,000.00	2,000,000.00	8,547.95	8,547.95
Westpac	AA-	TD	WATER	Quarterly	25/11/2021	27/11/2025	1.9400	2,000,000.00	2,000,000.00	637.81	637.81
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	14/12/2023	11/12/2025	5.2000	4,500,000.00	4,500,000.00	167,967.12	19,873.97

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ING Bank (Australia) Ltd	A	TD	WATER	Annual	14/12/2023	11/12/2025	5.2000	2,500,000.00	2,500,000.00	93,315.07	11,041.10
ING Bank (Australia) Ltd	A	TD	GENERAL	Annual	14/12/2023	11/12/2025	5.2000	3,000,000.00	3,000,000.00	111,978.08	13,249.32
ING Bank (Australia) Ltd	A	TD	WATER	Quarterly	16/12/2022	18/12/2025	4.7000	5,000,000.00	5,000,000.00	48,931.51	19,958.90
ING Bank (Australia) Ltd	A	TD	GENERAL	At Maturity	21/12/2023	18/12/2025	5.0800	3,500,000.00	3,500,000.00	124,216.44	15,100.82
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	11/01/2024	15/01/2026	4.9600	3,000,000.00	3,000,000.00	95,395.07	12,637.81
Westpac	AA-	TD	SEWER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	1,178.08	1,178.08
Westpac	AA-	TD	WATER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	1,178.08	1,178.08
Westpac	AA-	TD	GENERAL	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	1,178.08	1,178.08
Westpac	AA-	TD	WATER	Quarterly	04/03/2021	05/03/2026	1.2000	1,500,000.00	1,500,000.00	4,389.04	1,528.77
Westpac	AA-	TD	SEWER	Quarterly	04/03/2021	05/03/2026	1.2000	1,000,000.00	1,000,000.00	2,926.03	1,019.18
P&N Bank	BBB+	TD	WATER	Quarterly	16/03/2023	19/03/2026	4.7000	5,000,000.00	5,000,000.00	48,931.51	19,958.90
P&N Bank	BBB+	TD	WATER	Quarterly	13/07/2023	16/07/2026	5.7500	2,000,000.00	2,000,000.00	15,123.29	9,767.12
Westpac	AA-	TD	GENERAL	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	1,658.08	1,511.78
Westpac	AA-	TD	SEWER	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	1,658.08	1,511.78
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	2,000,000.00	2,000,000.00	3,316.16	3,023.56
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	4,500,000.00	4,500,000.00	7,461.37	6,803.01
Westpac	AA-	TD	WATER	Quarterly	02/12/2021	03/12/2026	2.0000	1,000,000.00	1,000,000.00	4,931.51	1,698.63
Westpac	AA-	TD	SEWER	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	9,863.01	3,397.26

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	9,863.01	3,397.26
Westpac	AA-	TD	WATER	Quarterly	25/01/2024	28/01/2027	4.8400	1,000,000.00	1,000,000.00	5,038.90	4,110.68
NAB	AA-	TD	SEWER	Quarterly	10/02/2022	09/02/2027	2.3500	1,000,000.00	1,000,000.00	1,287.67	1,287.67
Westpac	AA-	TD	SEWER	Semi-Annual	15/02/2024	18/02/2027	4.8700	1,340,000.00	1,340,000.00	3,039.41	3,039.41
Rabobank Australia Limited	A	TD	GENERAL	Annual	22/08/2024	29/08/2029	4.8500	5,000,000.00	5,000,000.00	6,643.84	6,643.84
Rabobank Australia Limited	A	TD	GENERAL	Annual	29/08/2024	30/08/2029	4.8500	3,000,000.00	3,000,000.00	1,195.89	1,195.89
TD SUBTOTALS								**218,290,000.00**	**218,290,000.00**	**3,928,996.76**	**835,551.30**

Asset Type: FRN

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Bendigo and Adelaide	BBB+	FRN	SEWER	Quarterly	05/09/2019	06/09/2024	5.3158	999,567.00	1,000,000.00	12,670.54	4,514.79
Citibank, N.A.	A+	FRN	SEWER	Quarterly	14/11/2019	14/11/2024	5.2363	1,000,345.00	1,000,000.00	2,582.28	2,582.28
Newcastle Greater Mutual Group Ltd	BBB+	FRN	WATER	Quarterly	05/02/2020	04/02/2025	5.4742	350,246.05	350,000.00	1,364.80	1,364.80
Newcastle Greater Mutual Group Ltd	BBB+	FRN	SEWER	Quarterly	05/02/2020	04/02/2025	5.4742	350,246.05	350,000.00	1,364.80	1,364.80
Macquarie Bank	A+	FRN	SEWER	Quarterly	12/02/2020	12/02/2025	5.2129	2,003,016.00	2,000,000.00	5,712.77	5,712.77
Commonwealth Bank	AA-	FRN	WATER	Quarterly	13/01/2023	13/01/2026	5.3533	3,017,448.00	3,000,000.00	21,119.87	13,639.92
ANZ Bank	AA-	FRN	SEWER	Quarterly	31/03/2023	31/03/2028	5.5053	1,515,580.50	1,500,000.00	14,705.94	7,013.60

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ING Bank (Australia) Ltd	A	FRN	GENERAL	Quarterly	20/08/2024	20/08/2029	5.3885	1,801,755.00	1,800,000.00	3,188.81	3,188.81
FRN SUBTOTALS								**11,038,203.60**	**11,000,000.00**	**62,709.81**	**39,381.77**

Asset Type: BOND

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	BOND	WATER	Semi-Annual	25/02/2022	25/02/2027	2.9000	434,581.20	450,000.00	214.52	214.52
NAB	AA-	BOND	SEWER	Semi-Annual	25/02/2022	25/02/2027	2.9000	434,581.20	450,000.00	214.52	214.52
Royal Bank of Canada	AAA	BOND	WATER	Semi-Annual	13/07/2022	13/07/2027	4.5000	1,003,013.00	1,000,000.00	5,917.81	3,821.92
BOND SUBTOTALS								**1,872,175.40**	**1,900,000.00**	**6,346.85**	**4,250.96**

ORANGE CITY COUNCIL

Portfolio by Asset Totals as at 31/08/2024

Type	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
CASH	16,810,461.93	16,810,461.93	49,282.94	49,282.94
TD	218,290,000.00	218,290,000.00	3,928,996.76	835,551.30
FRN	11,038,203.60	11,000,000.00	62,709.81	39,381.77
BOND	1,872,175.40	1,900,000.00	6,346.85	4,250.96
TOTALS	**248,010,840.93**	**248,000,461.93**	**4,047,336.35**	**928,466.97**

ORANGE CITY COUNCIL

Counterparty Compliance as at 31/08/2024

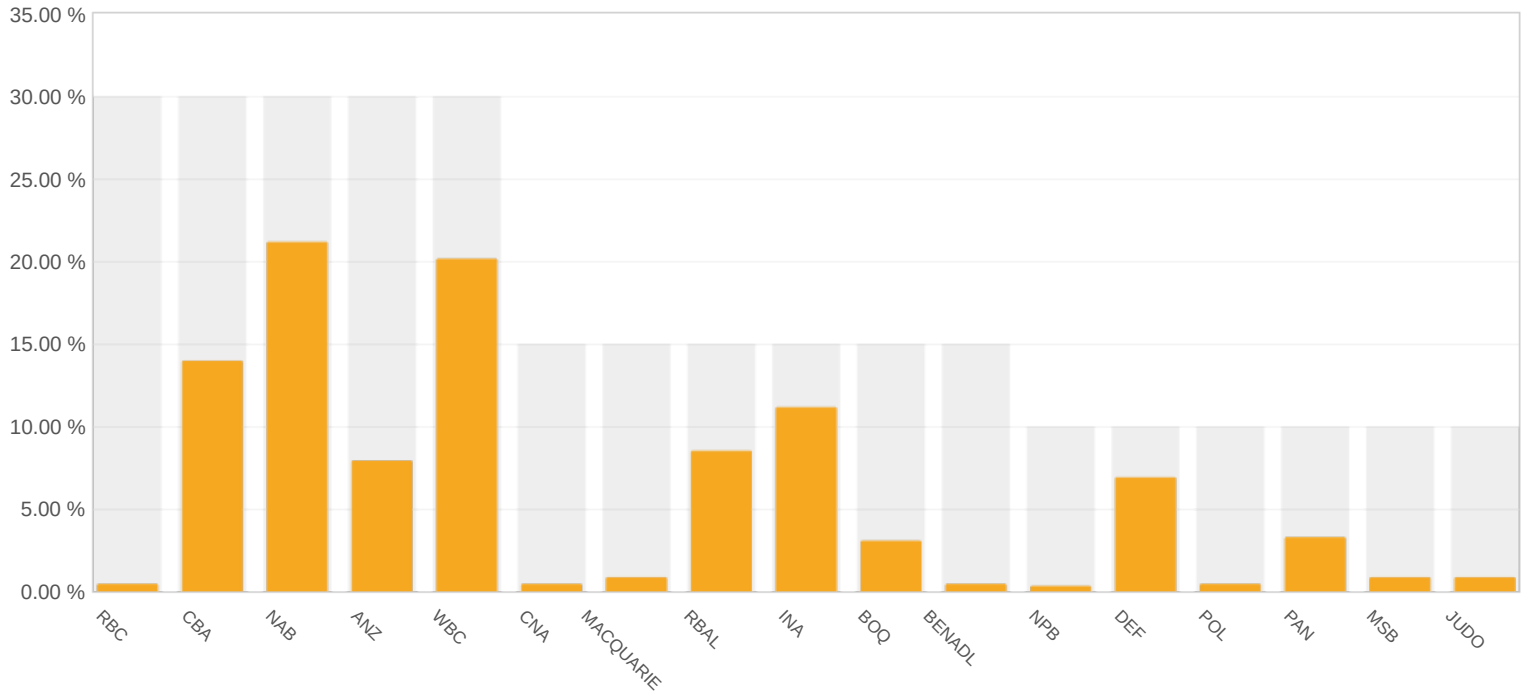
Long Term Investments

Compliant	Bank Group	Term	Rating	Invested ($)	Invested (%)	Limit (%)	Limit ($)	Available ($)
✔	Royal Bank of Canada	Long	AA-	1,003,013.00	0.40	30.00	-	73,400,239.28
✔	Commonwealth Bank	Long	AA-	34,527,909.93	13.92	30.00	-	39,875,342.35
✔	NAB	Long	AA-	52,369,162.40	21.12	30.00	-	22,034,089.88
✔	ANZ Bank	Long	AA-	19,515,580.50	7.87	30.00	-	54,887,671.78
✔	Westpac	Long	AA-	49,840,000.00	20.10	30.00	-	24,563,252.28
✔	Citibank, N.A.	Long	A+	1,000,345.00	0.40	15.00	-	36,201,281.14
✔	Macquarie Bank	Long	A+	2,003,016.00	0.81	15.00	-	35,198,610.14
✔	Rabobank Australia Limited	Long	A	21,000,000.00	8.47	15.00	-	16,201,626.14
✔	ING Bank (Australia) Ltd	Long	A	27,551,755.00	11.11	15.00	-	9,649,871.14
✔	BOQ	Long	A-	7,500,000.00	3.02	15.00	-	29,701,626.14
✔	Bendigo and Adelaide	Long	A-	999,567.00	0.40	15.00	-	36,202,059.14
✔	Newcastle Permanent	Long	BBB+	700,492.10	0.28	10.00	-	24,100,591.99
✔	Defence Bank	Long	BBB+	17,000,000.00	6.86	10.00	-	7,801,084.09
✔	Police Bank	Long	BBB+	1,000,000.00	0.40	10.00	-	23,801,084.09

Compliant	Bank Group	Term	Rating	Invested ($)	Invested (%)	Limit (%)	Limit ($)	Available ($)
✔	P&N Bank	Long	BBB+	8,000,000.00	3.23	10.00	-	16,801,084.09
✔	MyState Bank	Long	BBB	2,000,000.00	0.81	10.00	-	22,801,084.09
✔	JUDO	Long	BBB	2,000,000.00	0.81	10.00	-	22,801,084.09
TOTALS				**248,010,840.93**	**100.00**			

ORANGE CITY COUNCIL

Counterparty Compliance - Long Term Investments

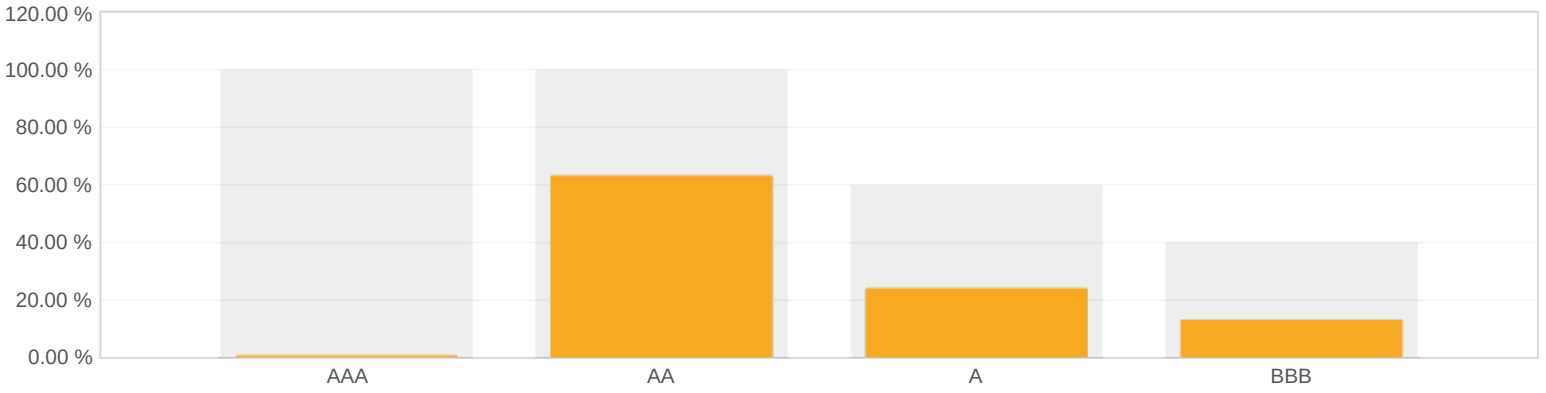


Credit Quality Compliance as at 31/08/2024

Long Term Investments

Compliant	Rating	Invested ($)	Invested (%)	Limit (%)	Available ($)
✔	AAA	1,003,013.00	0.40	100.00	247,007,827.93
✔	AA	156,252,652.83	63.00	100.00	91,758,188.10
✔	A	59,055,116.00	23.81	60.00	89,751,388.56
✔	BBB	31,700,059.10	12.78	40.00	67,504,277.27
TOTALS		**248,010,840.93**	**100.00**		

Credit Quality Compliance - Long Term Investments

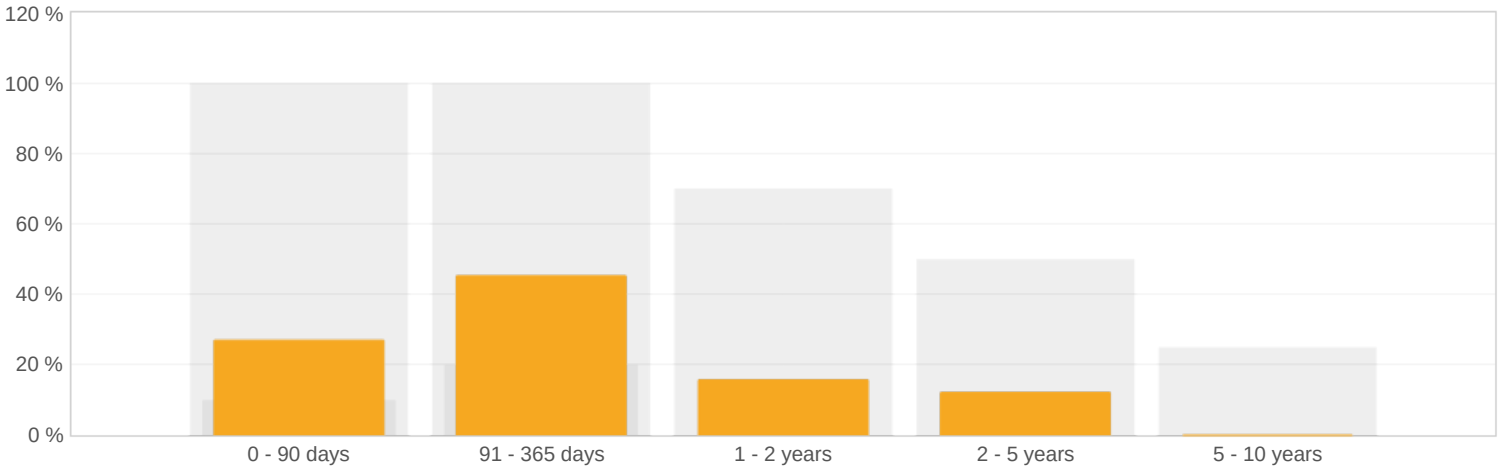


ORANGE CITY COUNCIL

Maturity Compliance as at 31/08/2024

Compliant	Term	Invested ($)	Invested (%)	Min Limit (%)	Max Limit (%)	Available ($)
✔	0 - 90 days	66,810,373.93	26.94	10.00	100.00	181,200,467.00
✔	91 - 365 days	112,153,508.10	45.22	20.00	100.00	135,857,332.83
✔	1 - 2 years	39,017,448.00	15.73	0.00	70.00	134,590,140.65
✔	2 - 5 years	30,029,510.90	12.11	0.00	50.00	93,975,909.57
✔	5 - 10 years	-	0.00	0.00	25.00	62,002,710.23
TOTALS		**248,010,840.93**	**100.00**			

Maturity Compliance



ORANGE CITY COUNCIL

Investment Report

01/09/2024 to 30/09/2024

ORANGE CITY COUNCIL

Portfolio Valuation as at 30/09/2024

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
BOQ	A-	TD	WATER	At Maturity	11/04/2024	17/10/2024	5.1000	5,000,000.00	5,000,000.00	120,863.01	20,958.90
Police Bank	BBB+	TD	WATER	Annual	14/10/2022	17/10/2024	4.7500	1,000,000.00	1,000,000.00	45,678.08	3,904.11
Defence Bank	BBB+	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	3,000,000.00	3,000,000.00	143,342.47	13,438.36
Suncorp Bank	AA-	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	238,904.11	22,397.26
Suncorp Bank	AA-	TD	SEWER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	238,904.11	22,397.26
Citibank, N.A.	A+	FRN	SEWER	Quarterly	14/11/2019	14/11/2024	5.2363	1,000,241.00	1,000,000.00	6,886.09	4,303.81
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	5,000,000.00	5,000,000.00	235,835.62	22,109.59
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	70,750.68	6,632.88
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	1,000,000.00	1,000,000.00	47,167.12	4,421.92
Commonwealth Bank	AA-	TD	WATER	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	70,750.68	6,632.88
Westpac	AA-	TD	GENERAL	At Maturity	23/11/2023	27/11/2024	5.4600	5,000,000.00	5,000,000.00	234,106.85	22,438.36
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	3,000,000.00	3,000,000.00	138,328.77	13,561.64
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	2,000,000.00	2,000,000.00	92,219.18	9,041.10
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.2900	5,000,000.00	5,000,000.00	221,745.21	21,739.73
Suncorp Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.4600	3,000,000.00	3,000,000.00	137,322.74	13,463.01
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	05/12/2024	1.6000	3,000,000.00	3,000,000.00	3,813.70	3,813.70

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	GENERAL	Quarterly	21/12/2023	19/12/2024	5.0400	5,000,000.00	5,000,000.00	5,523.29	5,523.29
Suncorp Bank	AA-	TD	WATER	Quarterly	21/12/2023	19/12/2024	5.1500	5,000,000.00	5,000,000.00	5,643.84	5,643.84
Westpac	AA-	TD	GENERAL	At Maturity	12/09/2024	16/01/2025	4.9400	2,000,000.00	2,000,000.00	5,143.01	5,143.01
Newcastle Greater Mutual Group Ltd	BBB+	FRN	WATER	Quarterly	05/02/2020	04/02/2025	5.4742	350,302.40	350,000.00	2,939.57	1,574.77
Newcastle Greater Mutual Group Ltd	BBB+	FRN	SEWER	Quarterly	05/02/2020	04/02/2025	5.4742	350,302.40	350,000.00	2,939.57	1,574.77
Commonwealth Bank	AA-	TD	SEWER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,870.25	609.86
Commonwealth Bank	AA-	TD	WATER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,870.25	609.86
Westpac	AA-	TD	WATER - GREEN TD	At Maturity	15/02/2024	20/02/2025	5.1900	5,000,000.00	5,000,000.00	162,809.59	21,328.77
ING Bank (Australia) Ltd	A	TD	GENERAL	Quarterly	17/02/2022	20/02/2025	2.5800	2,250,000.00	2,250,000.00	6,838.77	4,771.23
Westpac	AA-	TD	WATER	Quarterly	02/03/2023	03/03/2025	4.9500	3,000,000.00	3,000,000.00	11,798.63	11,798.63
Defence Bank	BBB+	TD	GENERAL	At Maturity	07/03/2024	06/03/2025	5.1200	5,000,000.00	5,000,000.00	145,884.93	21,041.10
Westpac	AA-	TD	SEWER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	3,376.71	3,376.71
Westpac	AA-	TD	WATER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	3,376.71	3,376.71
Westpac	AA-	TD	GENERAL	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	3,376.71	3,376.71
Defence Bank	BBB+	TD	SEWER	Annual	16/03/2023	20/03/2025	4.6000	4,000,000.00	4,000,000.00	99,309.59	15,123.29
Westpac	AA-	TD	WATER	Quarterly	21/03/2024	20/03/2025	5.0000	2,500,000.00	2,500,000.00	2,739.73	2,739.73
ING Bank (Australia) Ltd	A	TD	WATER	Annual	19/03/2020	20/03/2025	1.7800	2,000,000.00	2,000,000.00	19,116.71	2,926.03

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	TD	WATER	At Maturity	21/03/2024	20/03/2025	5.0100	2,000,000.00	2,000,000.00	53,256.99	8,235.62
NAB	AA-	TD	SEWER	At Maturity	21/03/2024	20/03/2025	5.0100	1,500,000.00	1,500,000.00	39,942.74	6,176.71
NAB	AA-	TD	SEWER	Quarterly	31/03/2022	03/04/2025	2.9500	3,500,000.00	3,500,000.00	282.88	282.88
NAB	AA-	TD	WATER	Quarterly	31/03/2022	03/04/2025	2.9500	1,500,000.00	1,500,000.00	121.23	121.23
BOQ	A-	TD	WATER	Annual	26/04/2024	01/05/2025	5.0000	2,500,000.00	2,500,000.00	54,109.59	10,273.97
JUDO BANK	BBB	TD	WATER	At Maturity	23/05/2024	22/05/2025	5.3000	1,000,000.00	1,000,000.00	19,021.92	4,356.16
JUDO BANK	BBB	TD	SEWER	Annual	23/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	19,021.92	4,356.16
MyState Bank	BBB	TD	SEWER	At Maturity	30/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	18,005.48	4,356.16
MyState Bank	BBB	TD	WATER	Annual	30/05/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	18,005.48	4,356.16
P&N Bank	BBB+	TD	GENERAL	At Maturity	06/06/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	16,989.04	4,356.16
Rabobank Australia Limited	A	TD	GENERAL	Annual	06/06/2024	12/06/2025	5.3200	1,000,000.00	1,000,000.00	17,053.15	4,372.60
NAB	AA-	TD	WATER	At Maturity	28/06/2024	19/06/2025	5.5000	4,000,000.00	4,000,000.00	57,260.27	18,082.19
NAB	AA-	TD	SEWER	At Maturity	28/06/2024	19/06/2025	5.5000	3,000,000.00	3,000,000.00	42,945.21	13,561.64
Rabobank Australia Limited	A	TD	WATER	Annual	06/06/2024	19/06/2025	5.3200	1,000,000.00	1,000,000.00	17,053.15	4,372.60
NAB	AA-	TD	GENERAL	At Maturity	04/07/2024	26/06/2025	5.4300	5,000,000.00	5,000,000.00	66,201.37	22,315.07
Rabobank Australia Limited	A	TD	SEWER	Annual	06/06/2024	26/06/2025	5.3200	1,000,000.00	1,000,000.00	17,053.15	4,372.60
NAB	AA-	TD	SEWER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	66,445.21	22,397.26
NAB	AA-	TD	WATER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	66,445.21	22,397.26

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Rabobank Australia Limited	A	TD	GENERAL	Annual	01/07/2024	03/07/2025	5.4600	5,000,000.00	5,000,000.00	68,810.96	22,438.36
Rabobank Australia Limited	A	TD	WATER	At Maturity	18/07/2024	17/07/2025	5.3300	2,000,000.00	2,000,000.00	21,904.11	8,761.64
NAB	AA-	TD	WATER	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	24,263.01	8,876.71
NAB	AA-	TD	GENERAL	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	24,263.01	8,876.71
NAB	AA-	TD	GENERAL	At Maturity	25/07/2024	24/07/2025	5.3500	3,000,000.00	3,000,000.00	29,901.37	13,191.78
Rabobank Australia Limited	A	TD	GENERAL	Annual	18/07/2024	24/07/2025	5.3300	3,000,000.00	3,000,000.00	32,856.16	13,142.47
NAB	AA-	TD	SEWER	At Maturity	18/07/2024	31/07/2025	5.3000	3,000,000.00	3,000,000.00	32,671.23	13,068.49
NAB	AA-	TD	SEWER	At Maturity	25/07/2024	31/07/2025	5.3500	2,000,000.00	2,000,000.00	19,934.25	8,794.52
NAB	AA-	TD	GENERAL	Annual	02/08/2024	07/08/2025	5.0500	2,000,000.00	2,000,000.00	16,602.74	8,301.37
NAB	AA-	TD	GENERAL	Annual	02/08/2024	14/08/2025	5.2000	2,000,000.00	2,000,000.00	17,095.89	8,547.95
NAB	AA-	TD	WATER	Annual	02/08/2024	28/08/2025	5.2000	2,000,000.00	2,000,000.00	17,095.89	8,547.95
Westpac	AA-	TD	WATER	Quarterly	25/11/2021	27/11/2025	1.9400	2,000,000.00	2,000,000.00	3,826.85	3,189.04
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	14/12/2023	11/12/2025	5.2000	4,500,000.00	4,500,000.00	187,200.00	19,232.88
ING Bank (Australia) Ltd	A	TD	WATER	Annual	14/12/2023	11/12/2025	5.2000	2,500,000.00	2,500,000.00	104,000.00	10,684.93
ING Bank (Australia) Ltd	A	TD	GENERAL	Annual	14/12/2023	11/12/2025	5.2000	3,000,000.00	3,000,000.00	124,800.00	12,821.92
ING Bank (Australia) Ltd	A	TD	WATER	Quarterly	16/12/2022	18/12/2025	4.7000	5,000,000.00	5,000,000.00	9,657.53	9,657.53
ING Bank (Australia) Ltd	A	TD	GENERAL	At Maturity	21/12/2023	18/12/2025	5.0800	3,500,000.00	3,500,000.00	138,830.14	14,613.70

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	11/01/2024	15/01/2026	4.9600	3,000,000.00	3,000,000.00	107,625.21	12,230.14
Westpac	AA-	TD	SEWER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	2,945.21	1,767.12
Westpac	AA-	TD	WATER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	2,945.21	1,767.12
Westpac	AA-	TD	GENERAL	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	2,945.21	1,767.12
Rabobank Australia Limited	A	TD	GENERAL	Annual	05/09/2024	05/03/2026	4.9200	4,000,000.00	4,000,000.00	14,018.63	14,018.63
Westpac	AA-	TD	WATER	Quarterly	04/03/2021	05/03/2026	1.2000	1,500,000.00	1,500,000.00	1,331.51	1,331.51
Westpac	AA-	TD	SEWER	Quarterly	04/03/2021	05/03/2026	1.2000	1,000,000.00	1,000,000.00	887.67	887.67
P&N Bank	BBB+	TD	WATER	Quarterly	16/03/2023	19/03/2026	4.7000	5,000,000.00	5,000,000.00	9,657.53	9,657.53
P&N Bank	BBB+	TD	WATER	Quarterly	13/07/2023	16/07/2026	5.7500	2,000,000.00	2,000,000.00	24,575.34	9,452.05
Westpac	AA-	TD	GENERAL	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	3,121.10	1,463.01
Westpac	AA-	TD	SEWER	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	3,121.10	1,463.01
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	2,000,000.00	2,000,000.00	6,242.19	2,926.03
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	4,500,000.00	4,500,000.00	14,044.93	6,583.56
Westpac	AA-	TD	WATER	Quarterly	02/12/2021	03/12/2026	2.0000	1,000,000.00	1,000,000.00	1,589.04	1,589.04
Westpac	AA-	TD	SEWER	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	3,178.08	3,178.08
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	3,178.08	3,178.08
Westpac	AA-	TD	WATER	Quarterly	25/01/2024	28/01/2027	4.8400	1,000,000.00	1,000,000.00	9,016.99	3,978.08
NAB	AA-	TD	SEWER	Quarterly	10/02/2022	09/02/2027	2.3500	1,000,000.00	1,000,000.00	3,219.18	1,931.51
Westpac	AA-	TD	SEWER	Semi-Annual	15/02/2024	18/02/2027	4.8700	1,340,000.00	1,340,000.00	8,403.08	5,363.67

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	BOND	WATER	Semi-Annual	25/02/2022	25/02/2027	2.9000	435,913.65	450,000.00	1,287.12	1,072.60
NAB	AA-	BOND	SEWER	Semi-Annual	25/02/2022	25/02/2027	2.9000	435,913.65	450,000.00	1,287.12	1,072.60
Royal Bank of Canada	AAA	BOND	WATER	Semi-Annual	13/07/2022	13/07/2027	4.5000	1,004,606.00	1,000,000.00	9,616.44	3,698.63
AMP Bank	BBB+	FRN	SEWER	Quarterly	13/09/2024	13/09/2027	5.6945	3,401,706.80	3,400,000.00	9,548.04	9,548.04
ANZ Bank	AA-	FRN	SEWER	Quarterly	31/03/2023	31/03/2028	5.4941	1,515,888.00	1,500,000.00	225.78	225.78
ING Bank (Australia) Ltd	A	FRN	GENERAL	Quarterly	20/08/2024	20/08/2029	5.3885	1,801,918.80	1,800,000.00	11,160.84	7,972.03
Rabobank Australia Limited	A	TD	GENERAL	Annual	22/08/2024	29/08/2029	4.8500	5,000,000.00	5,000,000.00	26,575.34	19,931.51
Rabobank Australia Limited	A	TD	GENERAL	Annual	29/08/2024	30/08/2029	4.8500	3,000,000.00	3,000,000.00	13,154.79	11,958.90
Rabobank Australia Limited	A	TD	SEWER	Annual	05/09/2024	06/09/2029	4.8500	4,000,000.00	4,000,000.00	13,819.18	13,819.18
Commonwealth Bank	AA-	CASH	WATER	Monthly	30/09/2024	30/09/2024	4.3500	7,056,887.62	7,056,887.62	11,217.59	11,217.59
Commonwealth Bank	AA-	CASH	SEWER	Monthly	30/09/2024	30/09/2024	4.3500	2,634,960.91	2,634,960.91	14,186.14	14,186.14
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	30/09/2024	30/09/2024	4.3500	1,864,036.45	1,864,036.45	34,073.20	34,073.20
TOTALS								**248,142,677.68**	**248,145,884.98**	**4,362,300.26**	**886,592.40**

Portfolio by Asset as at 30/09/2024

Asset Type: CASH

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Commonwealth Bank	AA-	CASH	WATER	Monthly	30/09/2024	30/09/2024	4.3500	7,056,887.62	7,056,887.62	11,217.59	11,217.59
Commonwealth Bank	AA-	CASH	SEWER	Monthly	30/09/2024	30/09/2024	4.3500	2,634,960.91	2,634,960.91	14,186.14	14,186.14
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	30/09/2024	30/09/2024	4.3500	1,864,036.45	1,864,036.45	34,073.20	34,073.20
CASH SUBTOTALS								**11,555,884.98**	**11,555,884.98**	**59,476.93**	**59,476.93**

Asset Type: TD

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
BOQ	A-	TD	WATER	At Maturity	11/04/2024	17/10/2024	5.1000	5,000,000.00	5,000,000.00	120,863.01	20,958.90
Police Bank	BBB+	TD	WATER	Annual	14/10/2022	17/10/2024	4.7500	1,000,000.00	1,000,000.00	45,678.08	3,904.11
Defence Bank	BBB+	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	3,000,000.00	3,000,000.00	143,342.47	13,438.36
Suncorp Bank	AA-	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	238,904.11	22,397.26
Suncorp Bank	AA-	TD	SEWER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	238,904.11	22,397.26
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	5,000,000.00	5,000,000.00	235,835.62	22,109.59
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	70,750.68	6,632.88
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	1,000,000.00	1,000,000.00	47,167.12	4,421.92

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Commonwealth Bank	AA-	TD	WATER	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	70,750.68	6,632.88
Westpac	AA-	TD	GENERAL	At Maturity	23/11/2023	27/11/2024	5.4600	5,000,000.00	5,000,000.00	234,106.85	22,438.36
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	3,000,000.00	3,000,000.00	138,328.77	13,561.64
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	2,000,000.00	2,000,000.00	92,219.18	9,041.10
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.2900	5,000,000.00	5,000,000.00	221,745.21	21,739.73
Suncorp Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.4600	3,000,000.00	3,000,000.00	137,322.74	13,463.01
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	05/12/2024	1.6000	3,000,000.00	3,000,000.00	3,813.70	3,813.70
Westpac	AA-	TD	GENERAL	Quarterly	21/12/2023	19/12/2024	5.0400	5,000,000.00	5,000,000.00	5,523.29	5,523.29
Suncorp Bank	AA-	TD	WATER	Quarterly	21/12/2023	19/12/2024	5.1500	5,000,000.00	5,000,000.00	5,643.84	5,643.84
Westpac	AA-	TD	GENERAL	At Maturity	12/09/2024	16/01/2025	4.9400	2,000,000.00	2,000,000.00	5,143.01	5,143.01
Commonwealth Bank	AA-	TD	SEWER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,870.25	609.86
Commonwealth Bank	AA-	TD	WATER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	1,870.25	609.86
Westpac	AA-	TD	WATER - GREEN TD	At Maturity	15/02/2024	20/02/2025	5.1900	5,000,000.00	5,000,000.00	162,809.59	21,328.77
ING Bank (Australia) Ltd	A	TD	GENERAL	Quarterly	17/02/2022	20/02/2025	2.5800	2,250,000.00	2,250,000.00	6,838.77	4,771.23
Westpac	AA-	TD	WATER	Quarterly	02/03/2023	03/03/2025	4.9500	3,000,000.00	3,000,000.00	11,798.63	11,798.63
Defence Bank	BBB+	TD	GENERAL	At Maturity	07/03/2024	06/03/2025	5.1200	5,000,000.00	5,000,000.00	145,884.93	21,041.10
Westpac	AA-	TD	SEWER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	3,376.71	3,376.71

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	3,376.71	3,376.71
Westpac	AA-	TD	GENERAL	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	3,376.71	3,376.71
Defence Bank	BBB+	TD	SEWER	Annual	16/03/2023	20/03/2025	4.6000	4,000,000.00	4,000,000.00	99,309.59	15,123.29
Westpac	AA-	TD	WATER	Quarterly	21/03/2024	20/03/2025	5.0000	2,500,000.00	2,500,000.00	2,739.73	2,739.73
ING Bank (Australia) Ltd	A	TD	WATER	Annual	19/03/2020	20/03/2025	1.7800	2,000,000.00	2,000,000.00	19,116.71	2,926.03
NAB	AA-	TD	WATER	At Maturity	21/03/2024	20/03/2025	5.0100	2,000,000.00	2,000,000.00	53,256.99	8,235.62
NAB	AA-	TD	SEWER	At Maturity	21/03/2024	20/03/2025	5.0100	1,500,000.00	1,500,000.00	39,942.74	6,176.71
NAB	AA-	TD	SEWER	Quarterly	31/03/2022	03/04/2025	2.9500	3,500,000.00	3,500,000.00	282.88	282.88
NAB	AA-	TD	WATER	Quarterly	31/03/2022	03/04/2025	2.9500	1,500,000.00	1,500,000.00	121.23	121.23
BOQ	A-	TD	WATER	Annual	26/04/2024	01/05/2025	5.0000	2,500,000.00	2,500,000.00	54,109.59	10,273.97
JUDO BANK	BBB	TD	WATER	At Maturity	23/05/2024	22/05/2025	5.3000	1,000,000.00	1,000,000.00	19,021.92	4,356.16
JUDO BANK	BBB	TD	SEWER	Annual	23/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	19,021.92	4,356.16
MyState Bank	BBB	TD	SEWER	At Maturity	30/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	18,005.48	4,356.16
MyState Bank	BBB	TD	WATER	Annual	30/05/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	18,005.48	4,356.16
P&N Bank	BBB+	TD	GENERAL	At Maturity	06/06/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	16,989.04	4,356.16
Rabobank Australia Limited	A	TD	GENERAL	Annual	06/06/2024	12/06/2025	5.3200	1,000,000.00	1,000,000.00	17,053.15	4,372.60
NAB	AA-	TD	WATER	At Maturity	28/06/2024	19/06/2025	5.5000	4,000,000.00	4,000,000.00	57,260.27	18,082.19
NAB	AA-	TD	SEWER	At Maturity	28/06/2024	19/06/2025	5.5000	3,000,000.00	3,000,000.00	42,945.21	13,561.64
Rabobank Australia	A	TD	WATER	Annual	06/06/2024	19/06/2025	5.3200	1,000,000.00	1,000,000.00	17,053.15	4,372.60

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Limited											
NAB	AA-	TD	GENERAL	At Maturity	04/07/2024	26/06/2025	5.4300	5,000,000.00	5,000,000.00	66,201.37	22,315.07
Rabobank Australia Limited	A	TD	SEWER	Annual	06/06/2024	26/06/2025	5.3200	1,000,000.00	1,000,000.00	17,053.15	4,372.60
NAB	AA-	TD	SEWER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	66,445.21	22,397.26
NAB	AA-	TD	WATER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	66,445.21	22,397.26
Rabobank Australia Limited	A	TD	GENERAL	Annual	01/07/2024	03/07/2025	5.4600	5,000,000.00	5,000,000.00	68,810.96	22,438.36
Rabobank Australia Limited	A	TD	WATER	At Maturity	18/07/2024	17/07/2025	5.3300	2,000,000.00	2,000,000.00	21,904.11	8,761.64
NAB	AA-	TD	WATER	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	24,263.01	8,876.71
NAB	AA-	TD	GENERAL	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	24,263.01	8,876.71
NAB	AA-	TD	GENERAL	At Maturity	25/07/2024	24/07/2025	5.3500	3,000,000.00	3,000,000.00	29,901.37	13,191.78
Rabobank Australia Limited	A	TD	GENERAL	Annual	18/07/2024	24/07/2025	5.3300	3,000,000.00	3,000,000.00	32,856.16	13,142.47
NAB	AA-	TD	SEWER	At Maturity	18/07/2024	31/07/2025	5.3000	3,000,000.00	3,000,000.00	32,671.23	13,068.49
NAB	AA-	TD	SEWER	At Maturity	25/07/2024	31/07/2025	5.3500	2,000,000.00	2,000,000.00	19,934.25	8,794.52
NAB	AA-	TD	GENERAL	Annual	02/08/2024	07/08/2025	5.0500	2,000,000.00	2,000,000.00	16,602.74	8,301.37
NAB	AA-	TD	GENERAL	Annual	02/08/2024	14/08/2025	5.2000	2,000,000.00	2,000,000.00	17,095.89	8,547.95
NAB	AA-	TD	WATER	Annual	02/08/2024	28/08/2025	5.2000	2,000,000.00	2,000,000.00	17,095.89	8,547.95
Westpac	AA-	TD	WATER	Quarterly	25/11/2021	27/11/2025	1.9400	2,000,000.00	2,000,000.00	3,826.85	3,189.04
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	14/12/2023	11/12/2025	5.2000	4,500,000.00	4,500,000.00	187,200.00	19,232.88

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ING Bank (Australia) Ltd	A	TD	WATER	Annual	14/12/2023	11/12/2025	5.2000	2,500,000.00	2,500,000.00	104,000.00	10,684.93
ING Bank (Australia) Ltd	A	TD	GENERAL	Annual	14/12/2023	11/12/2025	5.2000	3,000,000.00	3,000,000.00	124,800.00	12,821.92
ING Bank (Australia) Ltd	A	TD	WATER	Quarterly	16/12/2022	18/12/2025	4.7000	5,000,000.00	5,000,000.00	9,657.53	9,657.53
ING Bank (Australia) Ltd	A	TD	GENERAL	At Maturity	21/12/2023	18/12/2025	5.0800	3,500,000.00	3,500,000.00	138,830.14	14,613.70
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	11/01/2024	15/01/2026	4.9600	3,000,000.00	3,000,000.00	107,625.21	12,230.14
Westpac	AA-	TD	SEWER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	2,945.21	1,767.12
Westpac	AA-	TD	WATER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	2,945.21	1,767.12
Westpac	AA-	TD	GENERAL	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	2,945.21	1,767.12
Rabobank Australia Limited	A	TD	GENERAL	Annual	05/09/2024	05/03/2026	4.9200	4,000,000.00	4,000,000.00	14,018.63	14,018.63
Westpac	AA-	TD	WATER	Quarterly	04/03/2021	05/03/2026	1.2000	1,500,000.00	1,500,000.00	1,331.51	1,331.51
Westpac	AA-	TD	SEWER	Quarterly	04/03/2021	05/03/2026	1.2000	1,000,000.00	1,000,000.00	887.67	887.67
P&N Bank	BBB+	TD	WATER	Quarterly	16/03/2023	19/03/2026	4.7000	5,000,000.00	5,000,000.00	9,657.53	9,657.53
P&N Bank	BBB+	TD	WATER	Quarterly	13/07/2023	16/07/2026	5.7500	2,000,000.00	2,000,000.00	24,575.34	9,452.05
Westpac	AA-	TD	GENERAL	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	3,121.10	1,463.01
Westpac	AA-	TD	SEWER	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	3,121.10	1,463.01
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	2,000,000.00	2,000,000.00	6,242.19	2,926.03
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	4,500,000.00	4,500,000.00	14,044.93	6,583.56

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	02/12/2021	03/12/2026	2.0000	1,000,000.00	1,000,000.00	1,589.04	1,589.04
Westpac	AA-	TD	SEWER	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	3,178.08	3,178.08
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	3,178.08	3,178.08
Westpac	AA-	TD	WATER	Quarterly	25/01/2024	28/01/2027	4.8400	1,000,000.00	1,000,000.00	9,016.99	3,978.08
NAB	AA-	TD	SEWER	Quarterly	10/02/2022	09/02/2027	2.3500	1,000,000.00	1,000,000.00	3,219.18	1,931.51
Westpac	AA-	TD	SEWER	Semi-Annual	15/02/2024	18/02/2027	4.8700	1,340,000.00	1,340,000.00	8,403.08	5,363.67
Rabobank Australia Limited	A	TD	GENERAL	Annual	22/08/2024	29/08/2029	4.8500	5,000,000.00	5,000,000.00	26,575.34	19,931.51
Rabobank Australia Limited	A	TD	GENERAL	Annual	29/08/2024	30/08/2029	4.8500	3,000,000.00	3,000,000.00	13,154.79	11,958.90
Rabobank Australia Limited	A	TD	SEWER	Annual	05/09/2024	06/09/2029	4.8500	4,000,000.00	4,000,000.00	13,819.18	13,819.18
TD SUBTOTALS								**226,290,000.00**	**226,290,000.00**	**4,256,932.76**	**796,072.44**

Asset Type: FRN

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Citibank, N.A.	A+	FRN	SEWER	Quarterly	14/11/2019	14/11/2024	5.2363	1,000,241.00	1,000,000.00	6,886.09	4,303.81
Newcastle Greater Mutual Group Ltd	BBB+	FRN	WATER	Quarterly	05/02/2020	04/02/2025	5.4742	350,302.40	350,000.00	2,939.57	1,574.77
Newcastle Greater Mutual Group Ltd	BBB+	FRN	SEWER	Quarterly	05/02/2020	04/02/2025	5.4742	350,302.40	350,000.00	2,939.57	1,574.77
AMP Bank	BBB+	FRN	SEWER	Quarterly	13/09/2024	13/09/2027	5.6945	3,401,706.80	3,400,000.00	9,548.04	9,548.04

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ANZ Bank	AA-	FRN	SEWER	Quarterly	31/03/2023	31/03/2028	5.4941	1,515,888.00	1,500,000.00	225.78	225.78
ING Bank (Australia) Ltd	A	FRN	GENERAL	Quarterly	20/08/2024	20/08/2029	5.3885	1,801,918.80	1,800,000.00	11,160.84	7,972.03
FRN SUBTOTALS								**8,420,359.40**	**8,400,000.00**	**33,699.90**	**25,199.20**

Asset Type: BOND

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	BOND	WATER	Semi-Annual	25/02/2022	25/02/2027	2.9000	435,913.65	450,000.00	1,287.12	1,072.60
NAB	AA-	BOND	SEWER	Semi-Annual	25/02/2022	25/02/2027	2.9000	435,913.65	450,000.00	1,287.12	1,072.60
Royal Bank of Canada	AAA	BOND	WATER	Semi-Annual	13/07/2022	13/07/2027	4.5000	1,004,606.00	1,000,000.00	9,616.44	3,698.63
BOND SUBTOTALS								**1,876,433.30**	**1,900,000.00**	**12,190.69**	**5,843.84**

ORANGE CITY COUNCIL

Portfolio by Asset Totals as at 30/09/2024

Type	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
CASH	11,555,884.98	11,555,884.98	59,476.93	59,476.93
TD	226,290,000.00	226,290,000.00	4,256,932.76	796,072.44
FRN	8,420,359.40	8,400,000.00	33,699.90	25,199.20
BOND	1,876,433.30	1,900,000.00	12,190.69	5,843.84
TOTALS	**248,142,677.68**	**248,145,884.98**	**4,362,300.26**	**886,592.40**

ORANGE CITY COUNCIL

Counterparty Compliance as at 30/09/2024

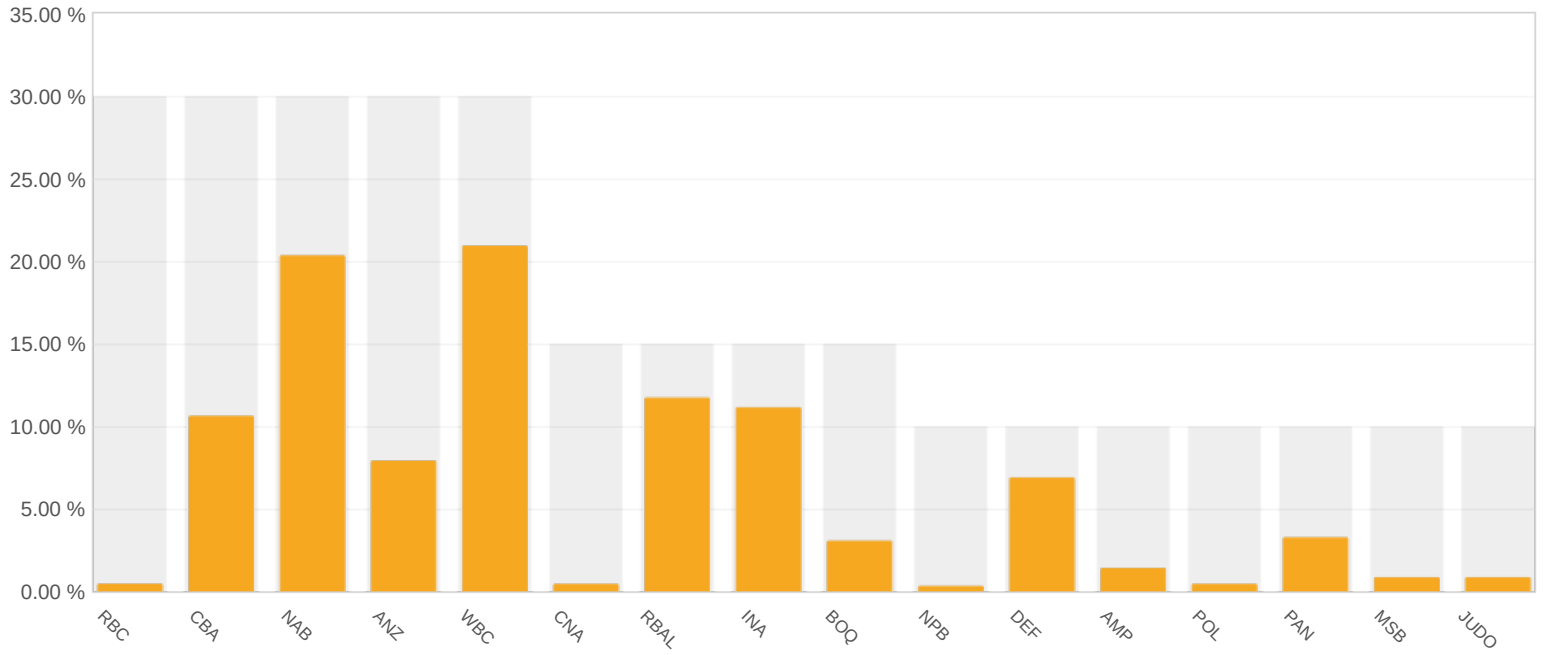
Long Term Investments

Compliant	Bank Group	Term	Rating	Invested ($)	Invested (%)	Limit (%)	Limit ($)	Available ($)
✔	Royal Bank of Canada	Long	AA-	1,004,606.00	0.41	30.00	-	73,438,197.30
✔	Commonwealth Bank	Long	AA-	26,255,884.98	10.58	30.00	-	48,186,918.32
✔	NAB	Long	AA-	50,371,827.30	20.30	30.00	-	24,070,976.00
✔	ANZ Bank	Long	AA-	19,515,888.00	7.87	30.00	-	54,926,915.30
✔	Westpac	Long	AA-	51,840,000.00	20.89	30.00	-	22,602,803.30
✔	Citibank, N.A.	Long	A+	1,000,241.00	0.40	15.00	-	36,221,160.65
✔	Rabobank Australia Limited	Long	A	29,000,000.00	11.69	15.00	-	8,221,401.65
✔	ING Bank (Australia) Ltd	Long	A	27,551,918.80	11.10	15.00	-	9,669,482.85
✔	BOQ	Long	A-	7,500,000.00	3.02	15.00	-	29,721,401.65
✔	Newcastle Permanent	Long	BBB+	700,604.80	0.28	10.00	-	24,113,662.97
✔	Defence Bank	Long	BBB+	17,000,000.00	6.85	10.00	-	7,814,267.77
✔	AMP Bank	Long	BBB+	3,401,706.80	1.37	10.00	-	21,412,560.97
✔	Police Bank	Long	BBB+	1,000,000.00	0.40	10.00	-	23,814,267.77
✔	P&N Bank	Long	BBB+	8,000,000.00	3.22	10.00	-	16,814,267.77

Compliant	Bank Group	Term	Rating	Invested ($)	Invested (%)	Limit (%)	Limit ($)	Available ($)
✔	MyState Bank	Long	BBB	2,000,000.00	0.81	10.00	-	22,814,267.77
✔	JUDO	Long	BBB	2,000,000.00	0.81	10.00	-	22,814,267.77
TOTALS				**248,142,677.68**	**100.00**			

ORANGE CITY COUNCIL

Counterparty Compliance - Long Term Investments



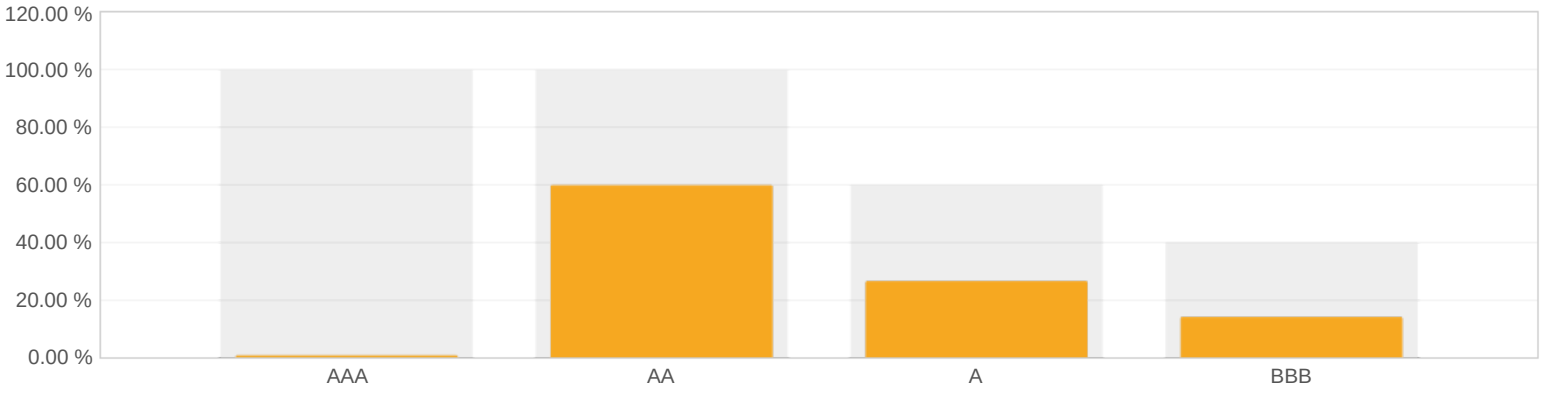
ORANGE CITY COUNCIL

Credit Quality Compliance as at 30/09/2024

Long Term Investments

Compliant	Rating	Invested ($)	Invested (%)	Limit (%)	Available ($)
✔	AAA	1,004,606.00	0.41	100.00	247,138,071.68
✔	AA	147,983,600.28	59.64	100.00	100,159,077.40
✔	A	65,052,159.80	26.22	60.00	83,833,446.81
✔	BBB	34,102,311.60	13.74	40.00	65,154,759.47
TOTALS		**248,142,677.68**	**100.00**		

Credit Quality Compliance - Long Term Investments

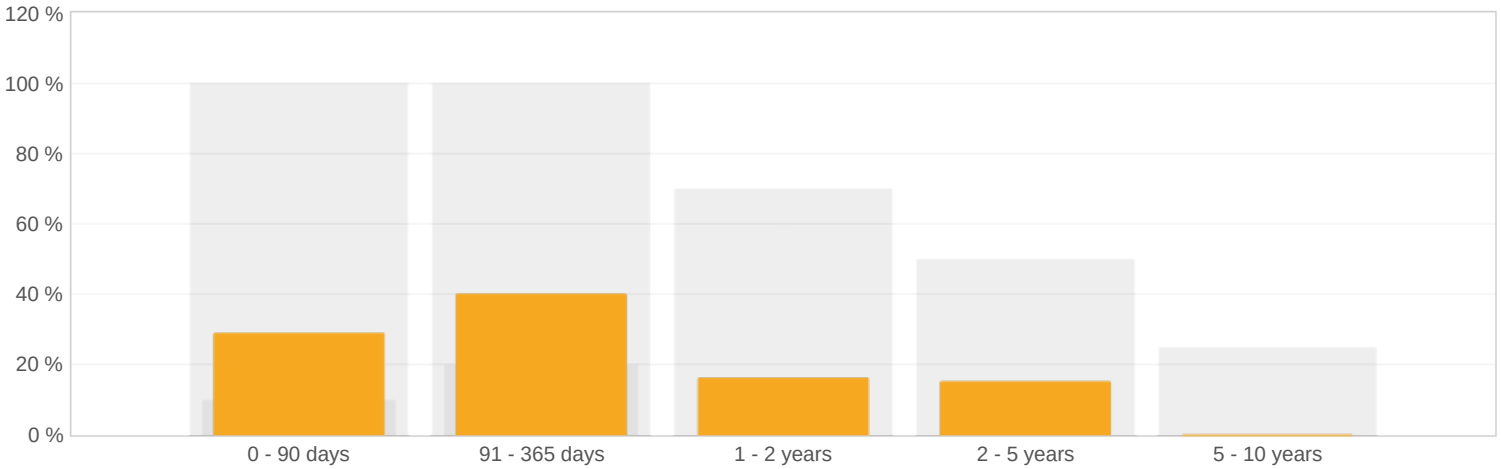


ORANGE CITY COUNCIL

Maturity Compliance as at 30/09/2024

Compliant	Term	Invested ($)	Invested (%)	Min Limit (%)	Max Limit (%)	Available ($)
✔	0 - 90 days	71,556,125.98	28.84	10.00	100.00	176,586,551.70
✔	91 - 365 days	99,150,604.80	39.96	20.00	100.00	148,992,072.88
✔	1 - 2 years	40,000,000.00	16.12	0.00	70.00	133,699,874.38
✔	2 - 5 years	37,435,946.90	15.09	0.00	50.00	86,635,391.94
✔	5 - 10 years	-	0.00	0.00	25.00	62,035,669.42
TOTALS		**248,142,677.68**	**100.00**			

Maturity Compliance



Investment Report

01/10/2024 to 31/10/2024

ORANGE CITY COUNCIL

Portfolio Valuation as at 31/10/2024

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Defence Bank	BBB+	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	3,000,000.00	3,000,000.00	157,228.77	13,886.30
Suncorp Bank	AA-	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	262,047.95	23,143.84
Suncorp Bank	AA-	TD	SEWER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	262,047.95	23,143.84
Citibank, N.A.	A+	FRN	SEWER	Quarterly	14/11/2019	14/11/2024	5.2363	999,658.00	1,000,000.00	11,333.36	4,447.27
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	5,000,000.00	5,000,000.00	258,682.19	22,846.58
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	77,604.66	6,853.97
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	1,000,000.00	1,000,000.00	51,736.44	4,569.32
Commonwealth Bank	AA-	TD	WATER	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	77,604.66	6,853.97
Westpac	AA-	TD	GENERAL	At Maturity	23/11/2023	27/11/2024	5.4600	5,000,000.00	5,000,000.00	257,293.15	23,186.30
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	3,000,000.00	3,000,000.00	152,342.47	14,013.70
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	2,000,000.00	2,000,000.00	101,561.64	9,342.47
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.2900	5,000,000.00	5,000,000.00	244,209.59	22,464.38
Suncorp Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.4600	3,000,000.00	3,000,000.00	151,234.52	13,911.78
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	05/12/2024	1.6000	3,000,000.00	3,000,000.00	7,890.41	4,076.71
Westpac	AA-	TD	GENERAL	Quarterly	21/12/2023	19/12/2024	5.0400	5,000,000.00	5,000,000.00	26,926.03	21,402.74
Suncorp Bank	AA-	TD	WATER	Quarterly	21/12/2023	19/12/2024	5.1500	5,000,000.00	5,000,000.00	27,513.70	21,869.86

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	GENERAL	At Maturity	12/09/2024	16/01/2025	4.9400	2,000,000.00	2,000,000.00	13,534.25	8,391.23
Newcastle Greater Mutual Group Ltd	BBB+	FRN	WATER	Quarterly	05/02/2020	04/02/2025	5.4742	350,280.00	350,000.00	4,566.83	1,627.26
Newcastle Greater Mutual Group Ltd	BBB+	FRN	SEWER	Quarterly	05/02/2020	04/02/2025	5.4742	350,280.00	350,000.00	4,566.83	1,627.26
Commonwealth Bank	AA-	TD	SEWER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	2,500.44	630.19
Commonwealth Bank	AA-	TD	WATER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	2,500.44	630.19
Westpac	AA-	TD	WATER - GREEN TD	At Maturity	15/02/2024	20/02/2025	5.1900	5,000,000.00	5,000,000.00	184,849.32	22,039.73
ING Bank (Australia) Ltd	A	TD	GENERAL	Quarterly	17/02/2022	20/02/2025	2.5800	2,250,000.00	2,250,000.00	11,769.04	4,930.27
Westpac	AA-	TD	WATER	Quarterly	02/03/2023	03/03/2025	4.9500	3,000,000.00	3,000,000.00	24,410.96	12,612.33
Defence Bank	BBB+	TD	GENERAL	At Maturity	07/03/2024	06/03/2025	5.1200	5,000,000.00	5,000,000.00	167,627.40	21,742.47
Westpac	AA-	TD	SEWER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	7,563.84	4,187.12
Westpac	AA-	TD	WATER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	7,563.84	4,187.12
Westpac	AA-	TD	GENERAL	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	7,563.84	4,187.12
Defence Bank	BBB+	TD	SEWER	Annual	16/03/2023	20/03/2025	4.6000	4,000,000.00	4,000,000.00	114,936.99	15,627.40
Westpac	AA-	TD	WATER	Quarterly	21/03/2024	20/03/2025	5.0000	2,500,000.00	2,500,000.00	13,356.16	10,616.44
ING Bank (Australia) Ltd	A	TD	WATER	Annual	19/03/2020	20/03/2025	1.7800	2,000,000.00	2,000,000.00	22,140.27	3,023.56
NAB	AA-	TD	WATER	At Maturity	21/03/2024	20/03/2025	5.0100	2,000,000.00	2,000,000.00	61,767.12	8,510.14
NAB	AA-	TD	SEWER	At Maturity	21/03/2024	20/03/2025	5.0100	1,500,000.00	1,500,000.00	46,325.34	6,382.60

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	TD	SEWER	Quarterly	31/03/2022	03/04/2025	2.9500	3,500,000.00	3,500,000.00	9,052.05	8,769.18
NAB	AA-	TD	WATER	Quarterly	31/03/2022	03/04/2025	2.9500	1,500,000.00	1,500,000.00	3,879.45	3,758.22
BOQ	A-	TD	WATER	Annual	26/04/2024	01/05/2025	5.0000	2,500,000.00	2,500,000.00	64,726.03	10,616.44
JUDO BANK	BBB	TD	WATER	At Maturity	23/05/2024	22/05/2025	5.3000	1,000,000.00	1,000,000.00	23,523.29	4,501.37
JUDO BANK	BBB	TD	SEWER	Annual	23/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	23,523.29	4,501.37
MyState Bank	BBB	TD	SEWER	At Maturity	30/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	22,506.85	4,501.37
MyState Bank	BBB	TD	WATER	Annual	30/05/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	22,506.85	4,501.37
P&N Bank	BBB+	TD	GENERAL	At Maturity	06/06/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	21,490.41	4,501.37
Rabobank Australia Limited	A	TD	GENERAL	Annual	06/06/2024	12/06/2025	5.3200	1,000,000.00	1,000,000.00	21,571.51	4,518.36
NAB	AA-	TD	WATER	At Maturity	28/06/2024	19/06/2025	5.5000	4,000,000.00	4,000,000.00	75,945.21	18,684.93
NAB	AA-	TD	SEWER	At Maturity	28/06/2024	19/06/2025	5.5000	3,000,000.00	3,000,000.00	56,958.90	14,013.70
Rabobank Australia Limited	A	TD	WATER	Annual	06/06/2024	19/06/2025	5.3200	1,000,000.00	1,000,000.00	21,571.51	4,518.36
NAB	AA-	TD	GENERAL	At Maturity	04/07/2024	26/06/2025	5.4300	5,000,000.00	5,000,000.00	89,260.27	23,058.90
Rabobank Australia Limited	A	TD	SEWER	Annual	06/06/2024	26/06/2025	5.3200	1,000,000.00	1,000,000.00	21,571.51	4,518.36
NAB	AA-	TD	SEWER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	89,589.04	23,143.84
NAB	AA-	TD	WATER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	89,589.04	23,143.84
Rabobank Australia Limited	A	TD	GENERAL	Annual	01/07/2024	03/07/2025	5.4600	5,000,000.00	5,000,000.00	91,997.26	23,186.30
Rabobank Australia Limited	A	TD	WATER	At Maturity	18/07/2024	17/07/2025	5.3300	2,000,000.00	2,000,000.00	30,957.81	9,053.70

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	TD	WATER	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	33,435.62	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	33,435.62	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	25/07/2024	24/07/2025	5.3500	3,000,000.00	3,000,000.00	43,532.88	13,631.51
Rabobank Australia Limited	A	TD	GENERAL	Annual	18/07/2024	24/07/2025	5.3300	3,000,000.00	3,000,000.00	46,436.71	13,580.55
NAB	AA-	TD	SEWER	At Maturity	18/07/2024	31/07/2025	5.3000	3,000,000.00	3,000,000.00	46,175.34	13,504.11
NAB	AA-	TD	SEWER	At Maturity	25/07/2024	31/07/2025	5.3500	2,000,000.00	2,000,000.00	29,021.92	9,087.67
NAB	AA-	TD	GENERAL	Annual	02/08/2024	07/08/2025	5.0500	2,000,000.00	2,000,000.00	25,180.82	8,578.08
NAB	AA-	TD	GENERAL	Annual	02/08/2024	14/08/2025	5.2000	2,000,000.00	2,000,000.00	25,928.77	8,832.88
NAB	AA-	TD	WATER	Annual	02/08/2024	28/08/2025	5.2000	2,000,000.00	2,000,000.00	25,928.77	8,832.88
Westpac	AA-	TD	WATER	Quarterly	25/11/2021	27/11/2025	1.9400	2,000,000.00	2,000,000.00	7,122.19	3,295.34
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	14/12/2023	11/12/2025	5.2000	4,500,000.00	4,500,000.00	207,073.97	19,873.97
ING Bank (Australia) Ltd	A	TD	WATER	Annual	14/12/2023	11/12/2025	5.2000	2,500,000.00	2,500,000.00	115,041.10	11,041.10
ING Bank (Australia) Ltd	A	TD	GENERAL	Annual	14/12/2023	11/12/2025	5.2000	3,000,000.00	3,000,000.00	138,049.32	13,249.32
ING Bank (Australia) Ltd	A	TD	WATER	Quarterly	16/12/2022	18/12/2025	4.7000	5,000,000.00	5,000,000.00	29,616.44	19,958.90
ING Bank (Australia) Ltd	A	TD	GENERAL	At Maturity	21/12/2023	18/12/2025	5.0800	3,500,000.00	3,500,000.00	153,930.96	15,100.82
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	11/01/2024	15/01/2026	4.9600	3,000,000.00	3,000,000.00	120,263.01	12,637.81
Westpac	AA-	TD	SEWER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	4,771.23	1,826.03

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	4,771.23	1,826.03
Westpac	AA-	TD	GENERAL	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	4,771.23	1,826.03
Rabobank Australia Limited	A	TD	GENERAL	Annual	05/09/2024	05/03/2026	4.9200	4,000,000.00	4,000,000.00	30,733.15	16,714.52
Westpac	AA-	TD	WATER	Quarterly	04/03/2021	05/03/2026	1.2000	1,500,000.00	1,500,000.00	2,860.27	1,528.77
Westpac	AA-	TD	SEWER	Quarterly	04/03/2021	05/03/2026	1.2000	1,000,000.00	1,000,000.00	1,906.85	1,019.18
P&N Bank	BBB+	TD	WATER	Quarterly	16/03/2023	19/03/2026	4.7000	5,000,000.00	5,000,000.00	29,616.44	19,958.90
P&N Bank	BBB+	TD	WATER	Quarterly	13/07/2023	16/07/2026	5.7500	2,000,000.00	2,000,000.00	5,671.23	5,671.23
Westpac	AA-	TD	GENERAL	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	195.07	195.07
Westpac	AA-	TD	SEWER	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	195.07	195.07
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	2,000,000.00	2,000,000.00	390.14	390.14
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	4,500,000.00	4,500,000.00	877.81	877.81
Westpac	AA-	TD	WATER	Quarterly	02/12/2021	03/12/2026	2.0000	1,000,000.00	1,000,000.00	3,287.67	1,698.63
Westpac	AA-	TD	SEWER	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	6,575.34	3,397.26
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	6,575.34	3,397.26
Westpac	AA-	TD	WATER	Quarterly	25/01/2024	28/01/2027	4.8400	1,000,000.00	1,000,000.00	928.22	928.22
NAB	AA-	TD	SEWER	Quarterly	10/02/2022	09/02/2027	2.3500	1,000,000.00	1,000,000.00	5,215.07	1,995.89
Westpac	AA-	TD	SEWER	Semi-Annual	15/02/2024	18/02/2027	4.8700	1,340,000.00	1,340,000.00	13,945.55	5,542.46
NAB	AA-	BOND	WATER	Semi-Annual	25/02/2022	25/02/2027	2.9000	432,812.25	450,000.00	2,395.48	1,108.36
NAB	AA-	BOND	SEWER	Semi-Annual	25/02/2022	25/02/2027	2.9000	432,812.25	450,000.00	2,395.48	1,108.36

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Royal Bank of Canada	AAA	BOND	WATER	Semi-Annual	13/07/2022	13/07/2027	4.5000	993,346.00	1,000,000.00	13,438.36	3,821.92
AMP Bank	BBB+	FRN	SEWER	Quarterly	13/09/2024	13/09/2027	5.6945	3,406,415.80	3,400,000.00	25,991.88	16,443.84
ANZ Bank	AA-	FRN	SEWER	Quarterly	31/03/2023	31/03/2028	5.4941	1,515,951.00	1,500,000.00	7,225.12	6,999.33
ING Bank (Australia) Ltd	A	FRN	GENERAL	Quarterly	20/08/2024	20/08/2029	5.3885	1,806,170.40	1,800,000.00	19,398.60	8,237.76
Rabobank Australia Limited	A	TD	GENERAL	Annual	22/08/2024	29/08/2029	4.8500	5,000,000.00	5,000,000.00	47,171.23	20,595.89
Rabobank Australia Limited	A	TD	GENERAL	Annual	29/08/2024	30/08/2029	4.8500	3,000,000.00	3,000,000.00	25,512.33	12,357.53
Rabobank Australia Limited	A	TD	SEWER	Annual	05/09/2024	06/09/2029	4.8500	4,000,000.00	4,000,000.00	30,295.89	16,476.71
Commonwealth Bank	AA-	CASH	WATER	Monthly	31/10/2024	31/10/2024	4.3500	10,178,287.74	10,178,287.74	26,443.82	26,443.82
Commonwealth Bank	AA-	CASH	SEWER	Monthly	31/10/2024	31/10/2024	4.3500	3,632,225.83	3,632,225.83	9,853.77	9,853.77
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	31/10/2024	31/10/2024	4.3500	3,435,343.35	3,435,343.35	7,073.99	7,073.99
TOTALS								**247,823,582.62**	**247,835,856.92**	**5,025,676.93**	**949,516.33**

ORANGE CITY COUNCIL

Portfolio by Asset as at 31/10/2024

Asset Type: CASH

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Commonwealth Bank	AA-	CASH	WATER	Monthly	31/10/2024	31/10/2024	4.3500	10,178,287.74	10,178,287.74	26,443.82	26,443.82
Commonwealth Bank	AA-	CASH	SEWER	Monthly	31/10/2024	31/10/2024	4.3500	3,632,225.83	3,632,225.83	9,853.77	9,853.77
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	31/10/2024	31/10/2024	4.3500	3,435,343.35	3,435,343.35	7,073.99	7,073.99
CASH SUBTOTALS								**17,245,856.92**	**17,245,856.92**	**43,371.57**	**43,371.57**

Asset Type: TD

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Defence Bank	BBB+	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	3,000,000.00	3,000,000.00	157,228.77	13,886.30
Suncorp Bank	AA-	TD	WATER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	262,047.95	23,143.84
Suncorp Bank	AA-	TD	SEWER	At Maturity	16/11/2023	14/11/2024	5.4500	5,000,000.00	5,000,000.00	262,047.95	23,143.84
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	5,000,000.00	5,000,000.00	258,682.19	22,846.58
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	77,604.66	6,853.97
Commonwealth Bank	AA-	TD	SEWER	At Maturity	16/11/2023	21/11/2024	5.3800	1,000,000.00	1,000,000.00	51,736.44	4,569.32
Commonwealth Bank	AA-	TD	WATER	At Maturity	16/11/2023	21/11/2024	5.3800	1,500,000.00	1,500,000.00	77,604.66	6,853.97
Westpac	AA-	TD	GENERAL	At Maturity	23/11/2023	27/11/2024	5.4600	5,000,000.00	5,000,000.00	257,293.15	23,186.30

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	3,000,000.00	3,000,000.00	152,342.47	14,013.70
Defence Bank	BBB+	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.5000	2,000,000.00	2,000,000.00	101,561.64	9,342.47
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.2900	5,000,000.00	5,000,000.00	244,209.59	22,464.38
Suncorp Bank	AA-	TD	GENERAL	At Maturity	30/11/2023	28/11/2024	5.4600	3,000,000.00	3,000,000.00	151,234.52	13,911.78
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	05/12/2024	1.6000	3,000,000.00	3,000,000.00	7,890.41	4,076.71
Westpac	AA-	TD	GENERAL	Quarterly	21/12/2023	19/12/2024	5.0400	5,000,000.00	5,000,000.00	26,926.03	21,402.74
Suncorp Bank	AA-	TD	WATER	Quarterly	21/12/2023	19/12/2024	5.1500	5,000,000.00	5,000,000.00	27,513.70	21,869.86
Westpac	AA-	TD	GENERAL	At Maturity	12/09/2024	16/01/2025	4.9400	2,000,000.00	2,000,000.00	13,534.25	8,391.23
Commonwealth Bank	AA-	TD	SEWER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	2,500.44	630.19
Commonwealth Bank	AA-	TD	WATER	Semi-Annual	11/02/2022	13/02/2025	2.1200	350,000.00	350,000.00	2,500.44	630.19
Westpac	AA-	TD	WATER - GREEN TD	At Maturity	15/02/2024	20/02/2025	5.1900	5,000,000.00	5,000,000.00	184,849.32	22,039.73
ING Bank (Australia) Ltd	A	TD	GENERAL	Quarterly	17/02/2022	20/02/2025	2.5800	2,250,000.00	2,250,000.00	11,769.04	4,930.27
Westpac	AA-	TD	WATER	Quarterly	02/03/2023	03/03/2025	4.9500	3,000,000.00	3,000,000.00	24,410.96	12,612.33
Defence Bank	BBB+	TD	GENERAL	At Maturity	07/03/2024	06/03/2025	5.1200	5,000,000.00	5,000,000.00	167,627.40	21,742.47
Westpac	AA-	TD	SEWER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	7,563.84	4,187.12
Westpac	AA-	TD	WATER	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	7,563.84	4,187.12
Westpac	AA-	TD	GENERAL	Quarterly	06/03/2023	06/03/2025	4.9300	1,000,000.00	1,000,000.00	7,563.84	4,187.12
Defence Bank	BBB+	TD	SEWER	Annual	16/03/2023	20/03/2025	4.6000	4,000,000.00	4,000,000.00	114,936.99	15,627.40

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	21/03/2024	20/03/2025	5.0000	2,500,000.00	2,500,000.00	13,356.16	10,616.44
ING Bank (Australia) Ltd	A	TD	WATER	Annual	19/03/2020	20/03/2025	1.7800	2,000,000.00	2,000,000.00	22,140.27	3,023.56
NAB	AA-	TD	WATER	At Maturity	21/03/2024	20/03/2025	5.0100	2,000,000.00	2,000,000.00	61,767.12	8,510.14
NAB	AA-	TD	SEWER	At Maturity	21/03/2024	20/03/2025	5.0100	1,500,000.00	1,500,000.00	46,325.34	6,382.60
NAB	AA-	TD	SEWER	Quarterly	31/03/2022	03/04/2025	2.9500	3,500,000.00	3,500,000.00	9,052.05	8,769.18
NAB	AA-	TD	WATER	Quarterly	31/03/2022	03/04/2025	2.9500	1,500,000.00	1,500,000.00	3,879.45	3,758.22
BOQ	A-	TD	WATER	Annual	26/04/2024	01/05/2025	5.0000	2,500,000.00	2,500,000.00	64,726.03	10,616.44
JUDO BANK	BBB	TD	WATER	At Maturity	23/05/2024	22/05/2025	5.3000	1,000,000.00	1,000,000.00	23,523.29	4,501.37
JUDO BANK	BBB	TD	SEWER	Annual	23/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	23,523.29	4,501.37
MyState Bank	BBB	TD	SEWER	At Maturity	30/05/2024	29/05/2025	5.3000	1,000,000.00	1,000,000.00	22,506.85	4,501.37
MyState Bank	BBB	TD	WATER	Annual	30/05/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	22,506.85	4,501.37
P&N Bank	BBB+	TD	GENERAL	At Maturity	06/06/2024	05/06/2025	5.3000	1,000,000.00	1,000,000.00	21,490.41	4,501.37
Rabobank Australia Limited	A	TD	GENERAL	Annual	06/06/2024	12/06/2025	5.3200	1,000,000.00	1,000,000.00	21,571.51	4,518.36
NAB	AA-	TD	WATER	At Maturity	28/06/2024	19/06/2025	5.5000	4,000,000.00	4,000,000.00	75,945.21	18,684.93
NAB	AA-	TD	SEWER	At Maturity	28/06/2024	19/06/2025	5.5000	3,000,000.00	3,000,000.00	56,958.90	14,013.70
Rabobank Australia Limited	A	TD	WATER	Annual	06/06/2024	19/06/2025	5.3200	1,000,000.00	1,000,000.00	21,571.51	4,518.36
NAB	AA-	TD	GENERAL	At Maturity	04/07/2024	26/06/2025	5.4300	5,000,000.00	5,000,000.00	89,260.27	23,058.90
Rabobank Australia Limited	A	TD	SEWER	Annual	06/06/2024	26/06/2025	5.3200	1,000,000.00	1,000,000.00	21,571.51	4,518.36

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	TD	SEWER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	89,589.04	23,143.84
NAB	AA-	TD	WATER	At Maturity	04/07/2024	03/07/2025	5.4500	5,000,000.00	5,000,000.00	89,589.04	23,143.84
Rabobank Australia Limited	A	TD	GENERAL	Annual	01/07/2024	03/07/2025	5.4600	5,000,000.00	5,000,000.00	91,997.26	23,186.30
Rabobank Australia Limited	A	TD	WATER	At Maturity	18/07/2024	17/07/2025	5.3300	2,000,000.00	2,000,000.00	30,957.81	9,053.70
NAB	AA-	TD	WATER	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	33,435.62	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	11/07/2024	17/07/2025	5.4000	2,000,000.00	2,000,000.00	33,435.62	9,172.60
NAB	AA-	TD	GENERAL	At Maturity	25/07/2024	24/07/2025	5.3500	3,000,000.00	3,000,000.00	43,532.88	13,631.51
Rabobank Australia Limited	A	TD	GENERAL	Annual	18/07/2024	24/07/2025	5.3300	3,000,000.00	3,000,000.00	46,436.71	13,580.55
NAB	AA-	TD	SEWER	At Maturity	18/07/2024	31/07/2025	5.3000	3,000,000.00	3,000,000.00	46,175.34	13,504.11
NAB	AA-	TD	SEWER	At Maturity	25/07/2024	31/07/2025	5.3500	2,000,000.00	2,000,000.00	29,021.92	9,087.67
NAB	AA-	TD	GENERAL	Annual	02/08/2024	07/08/2025	5.0500	2,000,000.00	2,000,000.00	25,180.82	8,578.08
NAB	AA-	TD	GENERAL	Annual	02/08/2024	14/08/2025	5.2000	2,000,000.00	2,000,000.00	25,928.77	8,832.88
NAB	AA-	TD	WATER	Annual	02/08/2024	28/08/2025	5.2000	2,000,000.00	2,000,000.00	25,928.77	8,832.88
Westpac	AA-	TD	WATER	Quarterly	25/11/2021	27/11/2025	1.9400	2,000,000.00	2,000,000.00	7,122.19	3,295.34
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	14/12/2023	11/12/2025	5.2000	4,500,000.00	4,500,000.00	207,073.97	19,873.97
ING Bank (Australia) Ltd	A	TD	WATER	Annual	14/12/2023	11/12/2025	5.2000	2,500,000.00	2,500,000.00	115,041.10	11,041.10
ING Bank (Australia) Ltd	A	TD	GENERAL	Annual	14/12/2023	11/12/2025	5.2000	3,000,000.00	3,000,000.00	138,049.32	13,249.32

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
ING Bank (Australia) Ltd	A	TD	WATER	Quarterly	16/12/2022	18/12/2025	4.7000	5,000,000.00	5,000,000.00	29,616.44	19,958.90
ING Bank (Australia) Ltd	A	TD	GENERAL	At Maturity	21/12/2023	18/12/2025	5.0800	3,500,000.00	3,500,000.00	153,930.96	15,100.82
ING Bank (Australia) Ltd	A	TD	SEWER	Annual	11/01/2024	15/01/2026	4.9600	3,000,000.00	3,000,000.00	120,263.01	12,637.81
Westpac	AA-	TD	SEWER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	4,771.23	1,826.03
Westpac	AA-	TD	WATER	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	4,771.23	1,826.03
Westpac	AA-	TD	GENERAL	Quarterly	10/02/2022	12/02/2026	2.1500	1,000,000.00	1,000,000.00	4,771.23	1,826.03
Rabobank Australia Limited	A	TD	GENERAL	Annual	05/09/2024	05/03/2026	4.9200	4,000,000.00	4,000,000.00	30,733.15	16,714.52
Westpac	AA-	TD	WATER	Quarterly	04/03/2021	05/03/2026	1.2000	1,500,000.00	1,500,000.00	2,860.27	1,528.77
Westpac	AA-	TD	SEWER	Quarterly	04/03/2021	05/03/2026	1.2000	1,000,000.00	1,000,000.00	1,906.85	1,019.18
P&N Bank	BBB+	TD	WATER	Quarterly	16/03/2023	19/03/2026	4.7000	5,000,000.00	5,000,000.00	29,616.44	19,958.90
P&N Bank	BBB+	TD	WATER	Quarterly	13/07/2023	16/07/2026	5.7500	2,000,000.00	2,000,000.00	5,671.23	5,671.23
Westpac	AA-	TD	GENERAL	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	195.07	195.07
Westpac	AA-	TD	SEWER	Quarterly	28/10/2021	29/10/2026	1.7800	1,000,000.00	1,000,000.00	195.07	195.07
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	2,000,000.00	2,000,000.00	390.14	390.14
Westpac	AA-	TD	WATER	Quarterly	28/10/2021	29/10/2026	1.7800	4,500,000.00	4,500,000.00	877.81	877.81
Westpac	AA-	TD	WATER	Quarterly	02/12/2021	03/12/2026	2.0000	1,000,000.00	1,000,000.00	3,287.67	1,698.63
Westpac	AA-	TD	SEWER	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	6,575.34	3,397.26
Westpac	AA-	TD	GENERAL	Quarterly	02/12/2021	03/12/2026	2.0000	2,000,000.00	2,000,000.00	6,575.34	3,397.26

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Westpac	AA-	TD	WATER	Quarterly	25/01/2024	28/01/2027	4.8400	1,000,000.00	1,000,000.00	928.22	928.22
NAB	AA-	TD	SEWER	Quarterly	10/02/2022	09/02/2027	2.3500	1,000,000.00	1,000,000.00	5,215.07	1,995.89
Westpac	AA-	TD	SEWER	Semi-Annual	15/02/2024	18/02/2027	4.8700	1,340,000.00	1,340,000.00	13,945.55	5,542.46
Rabobank Australia Limited	A	TD	GENERAL	Annual	22/08/2024	29/08/2029	4.8500	5,000,000.00	5,000,000.00	47,171.23	20,595.89
Rabobank Australia Limited	A	TD	GENERAL	Annual	29/08/2024	30/08/2029	4.8500	3,000,000.00	3,000,000.00	25,512.33	12,357.53
Rabobank Australia Limited	A	TD	SEWER	Annual	05/09/2024	06/09/2029	4.8500	4,000,000.00	4,000,000.00	30,295.89	16,476.71
TD SUBTOTALS								**220,290,000.00**	**220,290,000.00**	**4,890,993.41**	**860,723.39**

Asset Type: FRN

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
Citibank, N.A.	A+	FRN	SEWER	Quarterly	14/11/2019	14/11/2024	5.2363	999,658.00	1,000,000.00	11,333.36	4,447.27
Newcastle Greater Mutual Group Ltd	BBB+	FRN	WATER	Quarterly	05/02/2020	04/02/2025	5.4742	350,280.00	350,000.00	4,566.83	1,627.26
Newcastle Greater Mutual Group Ltd	BBB+	FRN	SEWER	Quarterly	05/02/2020	04/02/2025	5.4742	350,280.00	350,000.00	4,566.83	1,627.26
AMP Bank	BBB+	FRN	SEWER	Quarterly	13/09/2024	13/09/2027	5.6945	3,406,415.80	3,400,000.00	25,991.88	16,443.84
ANZ Bank	AA-	FRN	SEWER	Quarterly	31/03/2023	31/03/2028	5.4941	1,515,951.00	1,500,000.00	7,225.12	6,999.33
ING Bank (Australia) Ltd	A	FRN	GENERAL	Quarterly	20/08/2024	20/08/2029	5.3885	1,806,170.40	1,800,000.00	19,398.60	8,237.76

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
FRN SUBTOTALS								**8,428,755.20**	**8,400,000.00**	**73,082.63**	**39,382.73**

Asset Type: BOND

Issuer	Rating	Type	Allocation	Interest Paid	Purchase Date	Maturity Date	Rate (%)	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
NAB	AA-	BOND	WATER	Semi-Annual	25/02/2022	25/02/2027	2.9000	432,812.25	450,000.00	2,395.48	1,108.36
NAB	AA-	BOND	SEWER	Semi-Annual	25/02/2022	25/02/2027	2.9000	432,812.25	450,000.00	2,395.48	1,108.36
Royal Bank of Canada	AAA	BOND	WATER	Semi-Annual	13/07/2022	13/07/2027	4.5000	993,346.00	1,000,000.00	13,438.36	3,821.92
BOND SUBTOTALS								**1,858,970.50**	**1,900,000.00**	**18,229.32**	**6,038.63**

ORANGE CITY COUNCIL

Portfolio by Asset Totals as at 31/10/2024

Type	Capital Value ($)	Face Value ($)	Accrued ($)	Accrued MTD ($)
CASH	17,245,856.92	17,245,856.92	43,371.57	43,371.57
TD	220,290,000.00	220,290,000.00	4,890,993.41	860,723.39
FRN	8,428,755.20	8,400,000.00	73,082.63	39,382.73
BOND	1,858,970.50	1,900,000.00	18,229.32	6,038.63
TOTALS	**247,823,582.62**	**247,835,856.92**	**5,025,676.93**	**949,516.33**

ORANGE CITY COUNCIL

Counterparty Compliance as at 31/10/2024

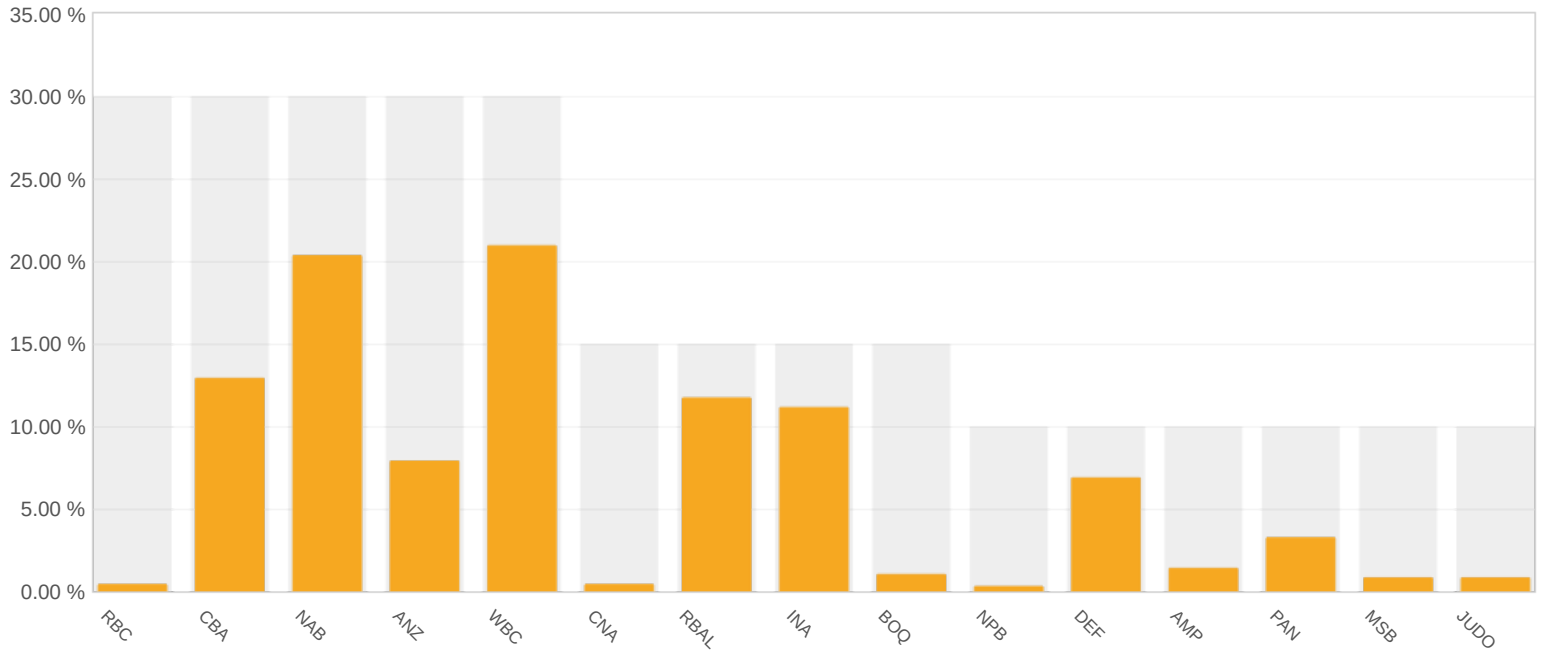
Long Term Investments

Compliant	Bank Group	Term	Rating	Invested ($)	Invested (%)	Limit (%)	Limit ($)	Available ($)
✔	Royal Bank of Canada	Long	AA-	993,346.00	0.40	30.00	-	73,353,728.79
✔	Commonwealth Bank	Long	AA-	31,945,856.92	12.89	30.00	-	42,401,217.87
✔	NAB	Long	AA-	50,365,624.50	20.32	30.00	-	23,981,450.29
✔	ANZ Bank	Long	AA-	19,515,951.00	7.88	30.00	-	54,831,123.79
✔	Westpac	Long	AA-	51,840,000.00	20.92	30.00	-	22,507,074.79
✔	Citibank, N.A.	Long	A+	999,658.00	0.40	15.00	-	36,173,879.39
✔	Rabobank Australia Limited	Long	A	29,000,000.00	11.70	15.00	-	8,173,537.39
✔	ING Bank (Australia) Ltd	Long	A	27,556,170.40	11.12	15.00	-	9,617,366.99
✔	BOQ	Long	A-	2,500,000.00	1.01	15.00	-	34,673,537.39
✔	Newcastle Permanent	Long	BBB+	700,560.00	0.28	10.00	-	24,081,798.26
✔	Defence Bank	Long	BBB+	17,000,000.00	6.86	10.00	-	7,782,358.26
✔	AMP Bank	Long	BBB+	3,406,415.80	1.38	10.00	-	21,375,942.46
✔	P&N Bank	Long	BBB+	8,000,000.00	3.23	10.00	-	16,782,358.26
✔	MyState Bank	Long	BBB	2,000,000.00	0.81	10.00	-	22,782,358.26

Compliant	Bank Group	Term	Rating	Invested ($)	Invested (%)	Limit (%)	Limit ($)	Available ($)
✔	JUDO	Long	BBB	2,000,000.00	0.81	10.00	-	22,782,358.26
TOTALS				**247,823,582.62**	**100.00**			

ORANGE CITY COUNCIL

Counterparty Compliance - Long Term Investments



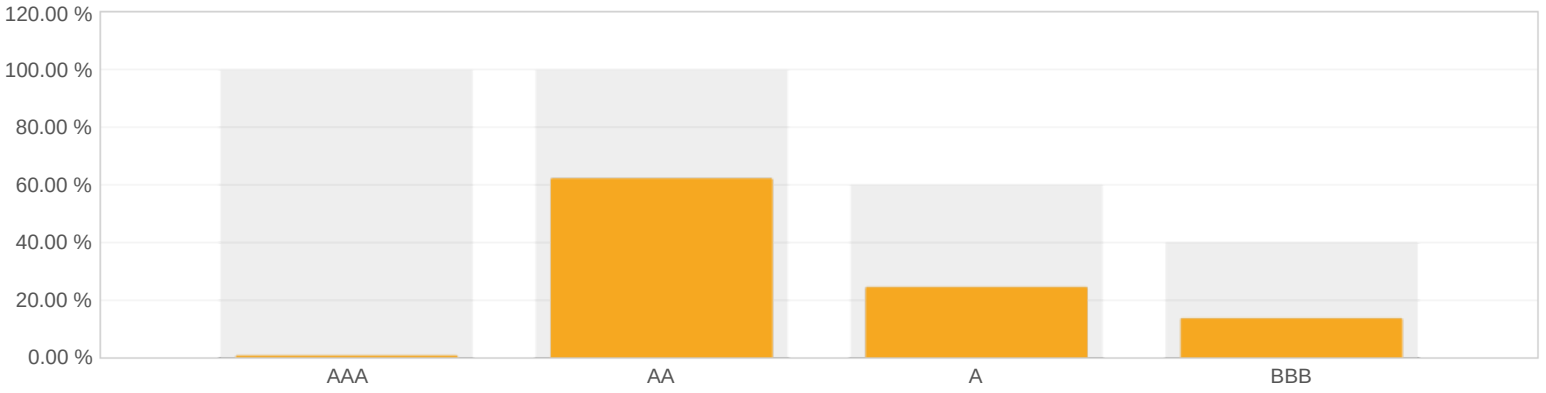
ORANGE CITY COUNCIL

Credit Quality Compliance as at 31/10/2024

Long Term Investments

Compliant	Rating	Invested ($)	Invested (%)	Limit (%)	Available ($)
✔	AAA	993,346.00	0.40	100.00	246,830,236.62
✔	AA	153,667,432.42	62.01	100.00	94,156,150.20
✔	A	60,055,828.40	24.23	60.00	88,638,321.17
✔	BBB	33,106,975.80	13.36	40.00	66,022,457.25
TOTALS		**247,823,582.62**	**100.00**		

Credit Quality Compliance - Long Term Investments

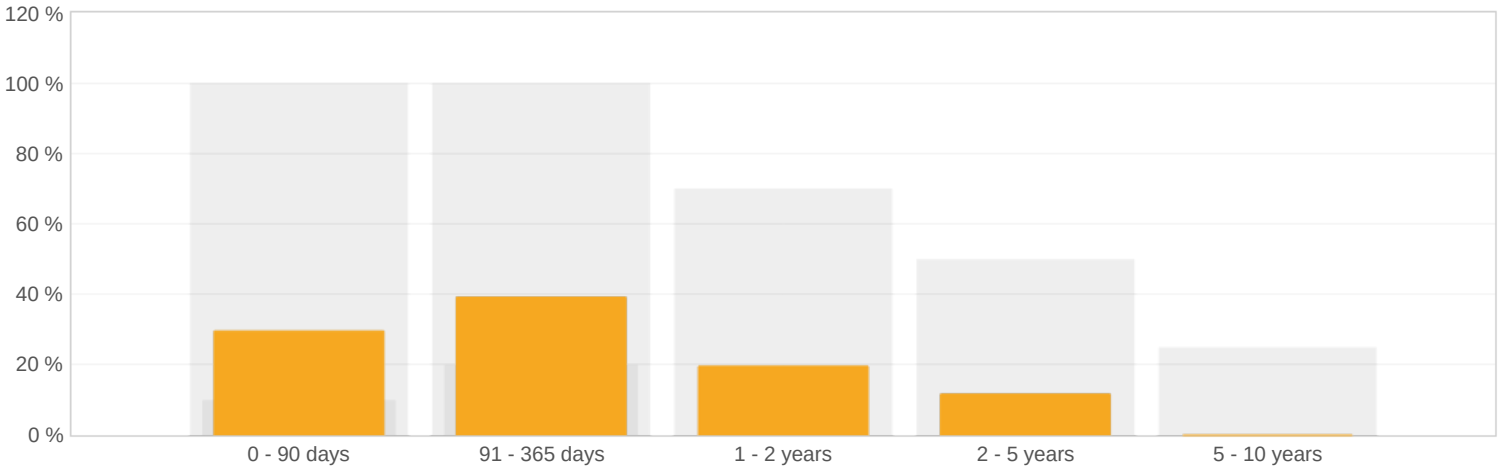


ORANGE CITY COUNCIL

Maturity Compliance as at 31/10/2024

Compliant	Term	Invested ($)	Invested (%)	Min Limit (%)	Max Limit (%)	Available ($)
✔	0 - 90 days	73,245,514.92	29.56	10.00	100.00	174,578,067.70
✔	91 - 365 days	97,150,560.00	39.20	20.00	100.00	150,673,022.62
✔	1 - 2 years	48,500,000.00	19.57	0.00	70.00	124,976,507.83
✔	2 - 5 years	28,927,507.70	11.67	0.00	50.00	94,984,283.61
✔	5 - 10 years	-	0.00	0.00	25.00	61,955,895.66
TOTALS		**247,823,582.62**	**100.00**			

Maturity Compliance



5.12 SMALL DONATIONS - REQUESTS FOR DONATIONS

RECORD NUMBER: 2024/1506
AUTHOR: Jen Sharp, Director Corporate & Commercial Services

EXECUTIVE SUMMARY

This report provides information to Council to allow for the consideration of a resolution regarding applications for funding through the Small Donations Program received between August 2024 and October 2024.

The Small Donations Program has been established to provide assistance to community and not-for-profit groups that offer significant contribution to the social, economic and/or environmental wellbeing of the Orange Local Government Area (LGA)

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "16.2. Support community organisations and groups to deliver services and programs".

FINANCIAL IMPLICATIONS

The budget for General Donations within the Small Donations Program for 2024/2025 is **$80,000** with $10,911 spent to date. The total requested in this round is $20,490**.**

Annual budget 23/24	**$80,000.00**
Total spent to date	$10,911
Requested amount this round	$20,490
Remaining balance	$46,199

POLICY AND GOVERNANCE IMPLICATIONS

Refer to Council's Donations and Grants Policy - ST32

This policy is in accordance with these sections in the Local Government Act 1993:

1. Section 356 (financial assistance)
2. Section 377 (delegated authority)
3. Section 610E (waive or reduce fees)

And in accordance with this section in the Local Government Regulation 2021:

Section 207 (record of donations for auditing purposes)

RECOMMENDATION

1 That this item be heard and voted on *in seriatim*.

2 That Council determines the following applications:

1. **To donate $500 to Orange High School for year 12 annual prize giving.**
2. **To donate $2,500 to Orange Community Broadcasters Ltd to assist with the running costs.**
3. **To donate $2,500 to Road Safety Education Limited to contribute to the costs associated with providing the Orange LGA 2025 RYDA program.**
4. **To donate $890 to Australian National Street Machines to contribute to the costs of hiring grounds for the 2 days for the car swap meet event.**
5. **To donate $2,500 to Orange Runners Club to contribute to the costs of the Orange Running Festival, enabling them to maintain a low registration fee for the shorter running events.**
6. **To donate $2,000 to Orange Eight Day Games – King and Queen of Sport to contribute to the costs of the holding the sporting event.**
7. **To donate $2,500 to the Orange Bush Nippers to contribute to the costs associated with running the club.**
8. **To donate $2,000 to the Midstate Budgerigar Club Inc. to contribute to the costs of the prizes for the national budgerigar show.**
9. **To donate $2,500 to the Springside Progress Association to contribute to the costs of restoring the Schoolhouse hall floors.**
10. **To donate $2,500 to Friends of Banjo Paterson Park Inc to contribute to the costs of holding the poetry competition and history in the park event.**

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Applicant 1	**Orange High School**
Assistance Would Support	The assistance would contribute to the annual prize giving for year 12 students.
Amount Requested	$500
Policy Category	Recognition Program – Annual Prize Giving for Year 12
Category Maximum	$500
Complies With Policy	Yes
Previously funded by Council?	Yes 2021/2022 $500 2020/2021 $500 2019/2020 $500 2018/2019 $200 2017/2018 $100 2016/2017 $100 2015/2016 $100 2014/2015 $100 2013/2014 $75
Applicant 2	**Orange Community Broadcasters Ltd**

Assistance Would Support	The assistance would contribute to the Orange Community Broadcasters Ltd running costs, which have increased due to the relocation of their broadcast antenna and operational costs. Orange City Council charges this organisation for the use of part of the Senior Citizens Centre. The costs that are currently charged are calculated as one third of the annualised costs of Electricity, Gas, Sewer and Water. The current charge is $2,350 per year. This is an increase from $1,590 per year under the previous agreement. The Council rates for the building are not passed onto the organisation.
Amount Requested	$2,500
Policy Category	Projects or Equipment Purchase or Providing a Community Service
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	No

Applicant 3	**Road Safety Education Limited**
Assistance Would Support	The assistance would contribute to the costs associated with providing the Orange LGA 2025 RYDA program. The funding will allow the costs of participating in RYDA for Orange LGA youth in 2025 to be subsidised.
Amount Requested	$2,500
Policy Category	Community event not being event sponsorship
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	Yes 2023/2024 $2,500 2022/2023 $2,000

Applicant 4	**Australian National Street Machines**
Assistance Would Support	The assistance would contribute to the costs associated hiring grounds for the 2 days for the car swap meet event.
Amount Requested	$890
Policy Category	Community event not being event sponsorship
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	No

Applicant 5	**Orange Runners Club**
Assistance Would Support	The assistance would contribute to the Orange Running Festival, hosted by the Orange Runners Club enabling them to maintain a low registration fee for the shorter running events that are targeted for local families.
Amount Requested	$2,500
Policy Category	Community event not being event sponsorship
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	Yes 2023/2024 $2,500 2017/2018 $500

Applicant 6	**Orange Eight Day Games – King and Queen of Sport**
Assistance Would Support	The assistance would contribute to holding the Eight Day Games – King and Queen of Sport event.
Amount Requested	$2,000
Policy Category	Community event not being event sponsorship
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	Yes 2023/2024 $2,000 2021/2022 $2,500 2019/2020 $2,000 2018/2019 $3,000 2017/2018 $1,500 2016/2017 $2,500 2015/2016 $750 2014/2015 $3,000

Applicant 7	**Orange Bush Nippers**
Assistance Would Support	The assistance would contribute to the costs associated with running the club, as the annual cost to run the club exceeds the revenue generated from registration fees.
Amount Requested	$2,000
Policy Category	Projects or Equipment Purchase or Providing a Community Service
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	Yes 2021/2022 $ 1,786.36 2019/2020 $2,000 2018/2019 $3,000 2017/2018 $3,000 2016/2017 $500

Applicant 8	**Midstate Budgerigar Club Inc.**
Assistance Would Support	The assistance would contribute to the costs of the prizes for the national budgerigar show as well as the cost of accommodation and travel for 3 judges.
Amount Requested	$2,000
Policy Category	Community event not being event sponsorship
Category Maximum	$2,500
Complies With Policy	Yes – However the event date has now occurred, 2 November 2024 (application signed 15 October 2024)
Previously funded by Council?	Yes 2023/2024 $2,000

Applicant 9	**Springside Progress Association**
Assistance Would Support	The assistance would contribute to the costs restoring the Schoolhouse hall floors, the original wide cypress timbers requires specialist attention.
Amount Requested	$2,500
Policy Category	Projects or Equipment Purchase or Providing a Community Service
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	No

Applicant 10	**Friends of Banjo Paterson Park Inc**
Assistance Would Support	The assistance would contribute to the costs of holding the poetry competition for adults and juniors and the history in the park event.
Amount Requested	$2,500
Policy Category	Community event not being event sponsorship
Category Maximum	$2,500
Complies With Policy	Yes
Previously funded by Council?	Yes 2021/2022 $2,500

ATTACHMENTS

1 Small Donations Program - Application Form - Educational recognition - School Annual Prize Giving Year 12 - Orange High School (redacted), D24/88668⇩

2 Small Donations Program - Updated Application Form - General Donations - Orange Community Broadcasters - community operated radio station (redacted), D24/88667⇩

3 Small Donations Program - Application Received - General Donations - RYDA Road Safety Program - Road Safety Education Limited - Term 1 2025 (redacted), D24/105727⇩

4 Small Donations Program - Application Form - General Donations - Australian National Street Machines (Redacted), D24/106121⇩

5 Small Donations Program - Application Form - General Donations - Orange Runners Club (redacted), D24/106520⇩
6 Small Donations Program - Application form - General Donations - Orange Eight Day Games - King and Queen of Sport - 16 - 23 November 2024 (redacted), D24/108921⇩
7 Small Donations Program - Application Form - General Donations - Orange Bush Nippers (redacted), D24/110913⇩
8 Small Donations Program - Application Form - General Donations - Midstate Budgerigar Club Inc - Annual Show - 2 November 2024 (redacted), D24/115858⇩
9 Small Donations Program - Application Form - General Donations - Springside Progress Association (redacted), D24/117154⇩
10 Small Donations Program - Application Form - General Donations - Friends of Banjo Paterson Park Inc (redacted), D24/121166⇩

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation: Orange High School

Contact name: Susen Sparkes

Position: School Adinistrative Officer

Postal address

Phone: Mobile:

Email:

ABN (if applicable): ACN (if applicable):

18 246 198 266

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Education

YOUR REQUEST

Amount requested: $ 500 Date event if applicable: 11/12/2024

What round are you applying for? ☐ Round 1 ☑ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

N/a

What will this donation be used for?

Officeworks vouchers for Dux and School Captains

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS	
	$
	$
	$
	$
	$
Total costs	$

FUNDING	
Your contribution	$
Funding from other councils	$
Contribution from other sources	$
Total funding	$

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☐ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☑ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable) Orange High School

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 16/08/2024

Print name Katrina Webb

Position in organisation Business Manager

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon [redacted] will be redacted.

APPLICANT'S DETAILS

Name of organisation: Orange Community Broadcasters Ltd.

Contact name: Gerald Faulkner

Position: Director

[redacted] Postal address

[redacted] Phone: [redacted] Mobile:

[redacted] Email:

ABN (if applicable): 16 387 554 344

ACN (if applicable): 652 572 739

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

FM107.5 is the community broadcaster with a full community broadcasting licence since 1998 for the LGAs of Blayney, Cabonne and Orange, broadcasting 24/7. Thanks to recent investment we can now also be heard in Dubbo, Forbes, Parkes, Cowra, Lithgow and Mount Victoria. FM107.5 aims to contribute to the health of our local Central West communities as a truly independent, community owned and operated local radio station that:

- Improves access to local information, community events and entertainment;
- Increases the sense of connectedness in our community between people of all ages, social, cultural and ethnic backgrounds with authentic local voices and
- Upholds the guiding principles of community broadcasting:
  - Promote harmony and diversity and contribute to an inclusive, cohesive and culturally diverse Australian community;
  - Pursue the principles of democracy, access and equity, especially for people and issues not adequately represented in other media;
  - Enhance the diversity of programming choices available to the public and present programs that expand the variety of viewpoints broadcast in Australia;
  - Demonstrate independence in programming as well as in editorial and management decisions;
  - Support and develop local arts and music and
  - Increase community involvement in broadcasting.

We have broadcast several hours each week of ethnic programs in community languages for over 20 years and have recently started a Fijian program. We livestream our programs globally 24/7.

YOUR REQUEST

Amount requested: $2,500 Date event if applicable:

What round are you applying for? ☐ Round 1 ☑ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source, including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

What will this donation be used for? In 2023 we invested some $60,000 in relocating our broadcast antenna to a new, more secure, site on Mount Canobolas (Gaanha Bula) with the help of grants from the Community Broadcasting Foundation and Cadia, and this has improved our signal and greatly increased our coverage of the Central West. This has increased our ongoing rental and telecommunication costs by around $10,000 a year.
In addition, Orange City Council has increased the cost of the annual licence for our premises by 63% this year. So, the donation will help to cover running costs.

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

FM107.5 is a truly independent, community owned and operated community radio station. We promote Orange and its local communities and businesses including shows in community languages to welcome new migrants. We broadcast Community Service Announcements to keep local communities informed. Many local community groups are members of OCB; we work in partnership with local businesses that sponsor the radio station to promote their products and services, as well as their support for this community group; we promote local events across the Central West, provide information about community and environmental issues; provide diverse local voices and opinions on important community issues and promote live music, local musicians, art and cultural events. We provide opportunities for volunteers to learn new skills and contribute to their communities

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

	$
	$
	$
	$
	$
Total costs	$

FUNDING

Funding from other councils Your contribution	$ $
Contribution from other sources	$
Total funding	$

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☑ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☑ **PROSPER: A strong and innovative economy**

This theme focuses on growing a diverse, innovative and resilient economy that supports business and employment.

☑ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed

Date 13/8/2024

Print name Gerald Faulkner

Position in organisation Director

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ROAD SAFETY Education
Providers of the RYDA Program

23 September 2024

Road Safety Education Limited
10 Julius Avenue
North Ryde, NSW, 2113
Toll free 1300 127 642
www.rse.org.au
ABN: 17110 667 706

The Yellow Ribbon
a commitment to road safety

Orange City Council
Donations & Grants
PO Box 35
Orange
NSW 2800

Dear Trustees,

Thank you for taking the time to consider our application for funding of $2,500 from the Orange City Council Small Donations Program towards the delivery of our road safety education program for youth throughout the Orange LGA. **If successful, your funding will help over 470 young people attend a potentially lifesaving program about road safety just at the time of getting their licence and setting them up for safe road use throughout their lives.**

2023 was the deadliest on Australia's roads in five and a half years, with the road death toll reaching 1,253, despite the growing population and advancements in vehicle safety. 244 of these fatalities were youth aged 17-25 years, an increase of 7% from last year. Youth safety remains a priority, as they are overrepresented in the nation's road toll, particularly in regional and rural areas.

While there is considerable emphasis on young people further developing their driving skills so they can pass their licence, road trauma statistics show there is need for greater education for our young drivers. There is clear demand from schools to provide our program but often tight budgets and limited funding can be a barrier. Road Safety Education try to minimise the cost to the schools as much as possible by working with community groups and organisations to source costs so all students can be included.

The program is aimed at year 11 students with a focus on the life skills required for making good decisions. It includes comprehensive classroom resources and web-based activities boosted by a full day workshop. The whole cohort approach increases social equity, meaning all students receive the same opportunity and for many RYDA will be the only road safety education they receive.

Road Safety Education work collaboratively to build community connections sourcing facilitators and volunteers from the local region including Police Officers, Driving Instructors and Crash Survivors. We believe together we are collectively making a significant impact towards better outcomes for young people and the community as a whole.

Regular and robust evaluation shows that RYDA is a highly impactful experience for students. It produces substantial increases in understanding of road risk factors, such as; speed, following distance, distractions, car safety features, hazard perception, and the role of personality and mind-state. Students obtain and retain new knowledge: our evaluation tools tell us that before participating at RYDA workshops, students grossly underestimate the impact of risk in key areas. Retained knowledge (measured three months post workshop), virtually doubles to 73%.

Founding Partner BOC A Linde company TOYOTA BRIDGESTONE BORAL
Community Partner Rotary Clubs in Australia & New Zealand

2023 NSW road deaths increased almost a quarter from 2022. Young drivers under 25 make up 15% of Orange LGA car licence holders, however, were involved in 29% of road fatalities and injuries over the last 5years and 25% of disqualifications. In most cases crashes are not accidents, but result from poor decisions. Road trauma has significant, negative impacts on individuals, families, community wellbeing and financial resources.

Although much progress has been made to improve road safety these statistics show more needs to be done to keep our communities safer for all.

At the time of this application teaching staff of seven Orange LGA high schools have identified their students need additional support to help reduce the disproportionate youth road crash statistics in their area, and have requested our program to support them. Once we have enough funding secured for these students we will contact more schools in the area to also participate.

Schools:	Students:
Anson Street School	10
Canobolas Rural Technology High School	25
James Sheahan Catholic High School	120
Kinross Wolaroi School	130
Orange Anglican Grammar School	40
Orange Christian School	15
Orange High School	130
Total Students:	**470**

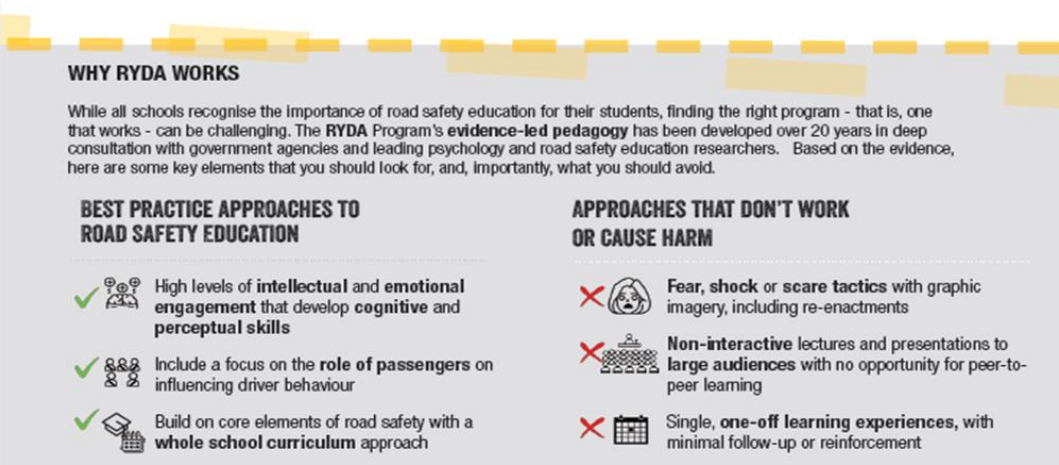
Youth road trauma is a community problem that needs a whole of community response. Road Safety Education is in a unique position to bring together all the essential elements to provide an effective and highly successful education program for young people.

We strongly believe every young person should have the opportunity to attend this program, not just those that can afford it.

With your support we hope to reduce the financial barriers to participation for students and schools and grow the program throughout the Orange LGA, providing more young people with our road safety program and contributing towards safer drivers on our roads.

Yours sincerely

Nickie Mouncey
Grant Coordinator


WHY RYDA WORKS
While all schools recognise the importance of road safety education for their students, finding the right program - that is, one that works - can be challenging. The RYDA Program's evidence-led pedagogy has been developed over 20 years in deep consultation with government agencies and leading psychology and road safety education researchers. Based on the evidence, here are some key elements that you should look for, and, importantly, what you should avoid.
BEST PRACTICE APPROACHES TO ROAD SAFETY EDUCATION
High levels of intellectual and emotional engagement that develop cognitive and perceptual skills
Include a focus on the role of passengers on influencing driver behaviour
Build on core elements of road safety with a whole school curriculum approach
APPROACHES THAT DON'T WORK OR CAUSE HARM
Fear, shock or scare tactics with graphic imagery, including re-enactments
Non-interactive lectures and presentations to large audiences with no opportunity for peer-to-peer learning
Single, one-off learning experiences, with minimal follow-up or reinforcement

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Road Safety Education Limited
Contact name:	NIckie Mouncey
Position:	Grant Coordinator
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
17 110 667 706	

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Road Safety Education (RSE) was established in 2004 in response to the high numbers of youth involved in road trauma across the country. With the support of road safety and education experts we have developed an innovative, comprehensive youth development program designed for 16-18 year olds, the time that they start the driving process or are passengers of inexperienced drivers. The aim of the program is to back up the physical skills of driving with the harder to develop cognitive life-skills and equip students with the tools to better assess risk, make improved decisions and drive with social responsibility.

Our RYDA student programme includes a practical and powerful full day workshop and extensive classroom/online resources to augment our road safety messages. We have also recently added a parent/caregiver seminar called DRIVE COACH providing knowledge and information to help to constructively support their young person during this high-risk time.

Our RYDA program is unique in its holistic and inclusive focus. The program is designed to be delivered with a whole school approach, where the entire cohort of year 10/11 students participate, irrespective of whether they have started the driving process or not. This inclusive approach ensures socially disadvantaged students don't miss out and learn alongside their peers, who they are most likely to be travelling with. For many this will be the only road safety education they will receive as they are not wealthy enough for private lessons nor significantly disadvantaged to access subsided government initiatives.

YOUR REQUEST

Amount requested: $ 2500 Date event if applicable: School term 1 2025

What round are you applying for? ☐ Round 1 ☑ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

It costs on average $65 per student to provide our RYDA program. Our corporate partners provide sponsorship towards support costs to ensure no school is required to pay more than $25 per student, however, this amount can still present a barrier to participation. Transport NSW assist with partial funding of approximately $10 per student and we work with local community organisations to minimise this cost even further, Rotary Clubs help coordinate our workshops in the area and provide volunteer support on workshop days, NSW Police support our program by providing facilitators to deliver our Road Choices workshop sessions and Orange LGA schools have indicated they can contribute $10 per student. Towac Park Raceway support our programs by providing venue hire at a heavily subsidised rate.

What will this donation be used for?

To positively impact a greater number of young people we work with teaching staff who advocate for their students. Seven schools in the Orange LGA have indicated their students started the driving process need additional help and have requested our RYDA program to support them.
This application requests support towards the local costs required to provide our program to over 470 Orange LGA students in 2025. We will allocate your funding, if successful, towards facilitator fees, venue hire and catering costs for volunteers, facilitators and teaching staff.
This application requests funding to subsidise the cost of participating in RYDA for Orange LGA youth in 2025, reducing the financial barriers and ensuring equity of access to this effective program. We aim to target your funding to those that need it most enabling more youth to receive our potentially life saving education despite their financial status.

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

Road trauma from crashes is the largest cause of harm for 15–24year-olds in Australia, often with lifelong consequences. While the government graduated driver licencing scheme has seen a reduction in youth road trauma, current statistics show it is not enough to only teach a young person the skill of controlling a vehicle, we must balance this with the life-skills of critical thinking, planning and resilience along with an appreciation for others safety on the road. RYDA is a comprehensive program teaching these life-skills.
We provide a program to youth at a critical time in their lives, when they start to drive or are travelling as passengers of inexperienced drivers. RYDA is a resilience program, not an information program. It includes a powerful workshop and resources that not only teach students skills to better assess risk and make improved decisions, it helps participants create personalised strategies and practice the implementation of these, laying the foundation for safe road use throughout their lives. RSE utilise road safety as a context to teach young people the importance of their actions on others. Our aim is to reduce apathy and build resilience by teaching youth to understand the impact of their decisions on others in both the short and long term. All of the sessions in our program aim to teach young people to drive safely so others survive.
RYDA is the most evaluated road safety program in the country and is annually updated to include the latest road safety information and education techniques available. Evidence proves that RYDA creates long term behavioural change.

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Facilitator Fees - 8 required per workshop @ $250 x4 workshops	$ 8000
Venue Hire - Towac Park Raceway	$ 1800
Catering for facilitators, volunteers and teaching staff	$ 553
Workshop resources - student workbooks/wristbands and teacher companion	$ 553
Program Coordination, Evaluation and Development	$ 3752
Total costs	$ 15,605

FUNDING

Your contribution	$ 2705
Funding from other councils	$ 0
Contribution from other sources	$ 10500
Total funding	$ 13105

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☑ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable) Road Safety Education Limited

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 23/09/2024

Print name

Position in organisation Grant Coordinator

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORGANISATION BACKGROUND

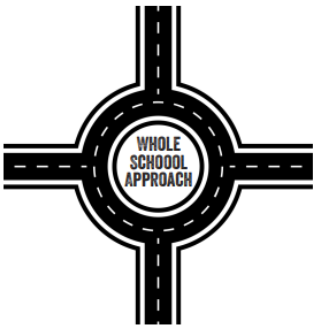
MISSION - Making our roads a safer place by empowering and motivating young people through world class education.

VALUES - Innovation, evidence-led, inclusivity, sustainability. Through consistent quality education, we strive to save lives and prevent serious injuries. We continuously focus on: accessibility and affordability for our students, stability and value for our partners, confidence and security for our team, and earning the trust of our communities.

Road Safety Education Limited (RSE) is a not-for-profit organisation with a commitment to saving lives through the delivery of evidence-based road safety education programs. Our flagship program RYDA, has been providing novice drivers and their passengers throughout Australia and New Zealand with lifesaving knowledge and skills for eighteen years. To date over 775,000 students have been through our program. Since establishment in 2004 the demand for the program continues to build.

Our Advisory Council of road safety and education experts play a crucial role in ensuring that our education programs are responsive to new research, evidence led and best practice.

Youth road trauma is a community problem that needs a whole community response. RSE is in a unique position to bring together all the essential elements to provide an effective and highly successful road safety education program for young people.



HOW RYDA WORKS

RYDA focuses on building resilience - giving students the tools and motivation they need to make good choices from any seat in the car.

RYDA follows best practice guidelines and supports teachers in taking a **whole-school approach to road safety.**

The workshop front-loads student and teacher road safety knowledge and provides students with practical tools for lasting behaviour change. Supporting resources provide additional assistance for parents and the school community.

Teachers are provided with an extensive kit of resources, covering everything from school policy to over 50 classroom and homework lesson resources giving teachers an authentic road safety context for curriculum learning. Further, harnessing a sophistical learning management system, students are invited to complete an online course which includes assignments and quizzes. Teacher can use this course to assess learning outcomes.

EVIDENCE OF NEED

Getting into the car as a novice driver or as a passenger of a novice driver is said to be among the most dangerous things a person will do in their lives.

THE STATISTICS - In 2023, there were 1266 people killed on Australian roads, a 7.3% increase compared to the previous year. The sharpest increase was in South Australia, which rose by 61.4% from 70 deaths in 2022 to 113 deaths in 2023. In Victoria road deaths increased by 14.5%, from 249 in 2022 to 285 2023. **In New South Wales road deaths increased by almost a quarter,** from 286 to 364.

Police data shows that young drivers are more at risk of having a serious crash in the first 12 months of driving solo than at any other time in their lives. Novice drivers lack of experience affects their recognition of and response to hazardous situations and results in dangerous practices such as speeding and tailgating. In most

cases, crashes are not accidents, but result from poor decisions. Capturing students at the time they are starting the driving process is critical for setting them up for a lifetime of safer road use.

Additionally, a huge 87% of students reported that while displaying their L plates they have experienced negative behaviour from drivers including tailgating (70%), aggressive overtaking (66%), road rage (29%), honking horns (46%) and flashing lights (26%). One student even reported that another driver got out of their car and pointed aggressively at them. It would be greatly appreciated if experienced drivers could endeavour to be more patient and supportive of our young drivers.

Now, more than ever, we need to be investing time into our young people and the next generation of drivers and their passengers, to ensure they can be safer road users and ultimately, they don't miss out on the future they're looking forward to.

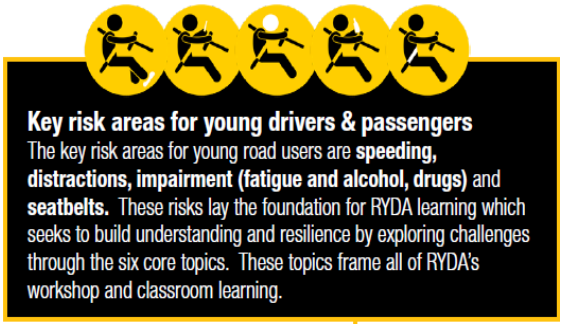
THE LOGIC - While there is considerable emphasis on young people learning driving skills so they can pass their licence, there is need for greater education around driver and passenger attitudes and how making better decisions can actually keep young people safer on the road. It has been suggested that physical vehicle handling and traffic laws can be learned with approximately 15 hours of driving experience. It's the higher-order cognitive skills that are more difficult to develop and need increased focus through education like our RYDA program. Skills such as question asking, critical and lateral thinking, decision making and problem solving. In driving, these skills assist with hazard and risk perception, resisting distraction and appropriately allocating attention between tasks.

Youth road trauma is a major problem in all local communities; resulting in huge economic and social costs. Education for high-risk young drivers and their passengers is recognised as the key to making our roads a safer place for all.

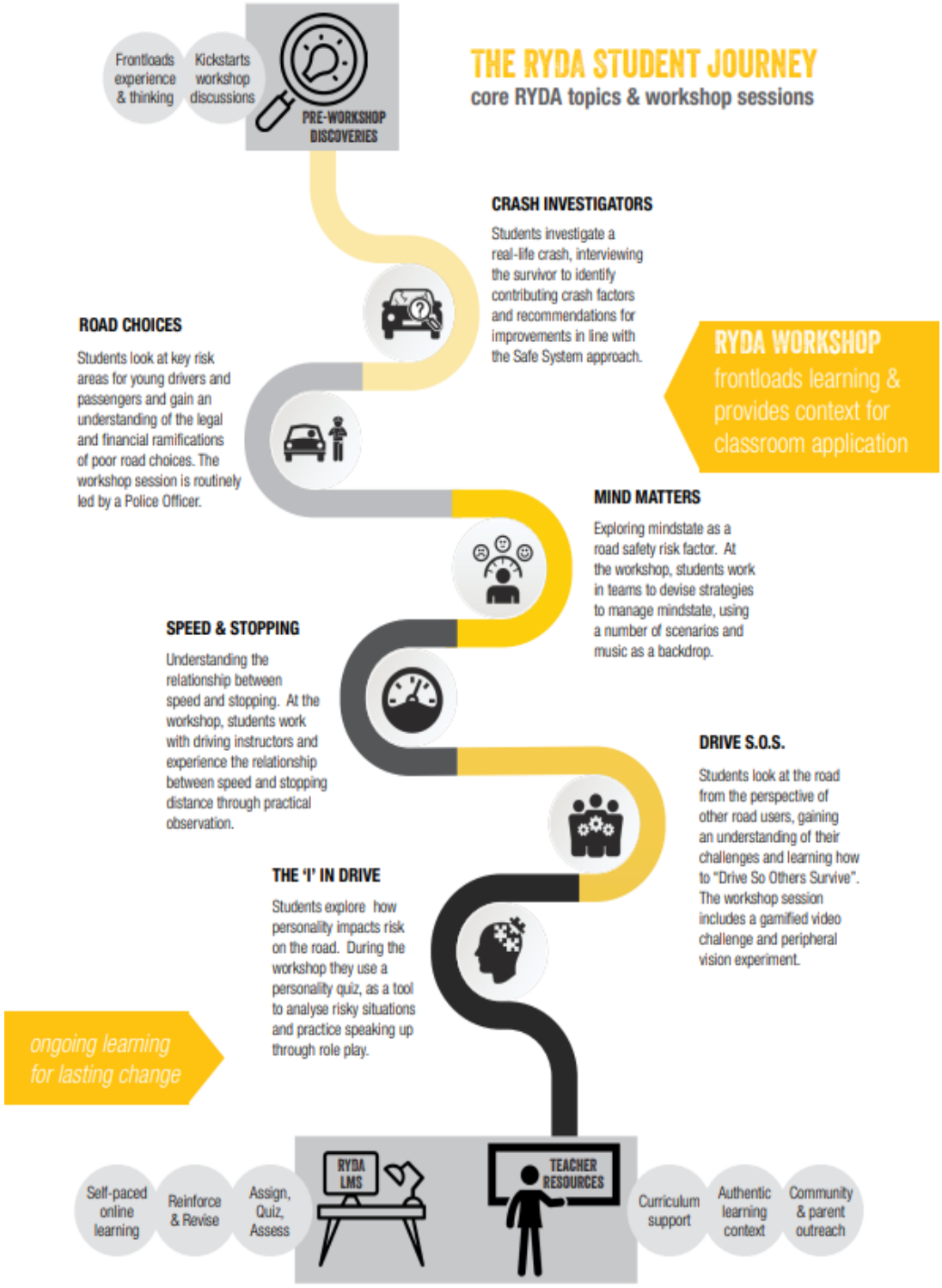
OUR RYDA PROGRAM

RYDA is an essential youth development and resilience program, Our RYDA program is curriculum-aligned, evidence-based and best practice designed for 16-18 year old students approaching the time in their lives where they start to drive independently or are travelling as passengers of novice drivers. RYDA features pre and post classroom learning resources and a highly engaging and memorable one-day workshop, designed to front-load students' understanding of road safety.

What makes our RYDA road safety program unique is the holistic focus and the inclusion of the entire cohort of senior students at the schools, whether they are ready to drive or not. By attending as part of their cohort socially disadvantaged students aren't singled out but learn alongside their peers and for many of them it will be the only road safety education they receive. Our workshop has a much more all-inclusive approach and is taught in facilitator lead class sized groups to enable discussion and inquiry from students which has proven the most effective method to achieve long term behaviour change.



While the RYDA program is built around the leading causes of death and injury in young people - speed, distraction, impairment and seatbelts, it approaches the topics in an innovative way, allowing students to acquire essential life skills as they go.


THE RYDA STUDENT JOURNEY
core RYDA topics & workshop sessions
Frontloads experience & thinking
Kickstarts workshop discussions
PRE-WORKSHOP DISCOVERIES
CRASH INVESTIGATORS
Students investigate a real-life crash, interviewing the survivor to identify contributing crash factors and recommendations for improvements in line with the Safe System approach.
RYDA WORKSHOP
frontloads learning & provides context for classroom application
ROAD CHOICES
Students look at key risk areas for young drivers and passengers and gain an understanding of the legal and financial ramifications of poor road choices. The workshop session is routinely led by a Police Officer.
MIND MATTERS
Exploring mindstate as a road safety risk factor. At the workshop, students work in teams to devise strategies to manage mindstate, using a number of scenarios and music as a backdrop.
SPEED & STOPPING
Understanding the relationship between speed and stopping. At the workshop, students work with driving instructors and experience the relationship between speed and stopping distance through practical observation.
DRIVE S.O.S.
Students look at the road from the perspective of other road users, gaining an understanding of their challenges and learning how to "Drive So Others Survive". The workshop session includes a gamified video challenge and peripheral vision experiment.
THE 'I' IN DRIVE
Students explore how personality impacts risk on the road. During the workshop they use a personality quiz, as a tool to analyse risky situations and practice speaking up through role play.
ongoing learning for lasting change
Self-paced online learning
Reinforce & Revise
Assign, Quiz, Assess
RYDA LMS
TEACHER RESOURCES
Curriculum support
Authentic learning context
Community & parent outreach

LEARNING OUTCOMES

The aim of the program is to increase an understanding of road safety issues (including risk factors), educate students about their rights and responsibilities on the road and equip them with the tools they need to choose behaviours that lead to safer outcomes on our roads.

The RYDA program takes students on a journey from first identifying and understanding road safety issues to accepting the risk on a personal level, developing strategies to mitigate the risk and finally approaching road use as a social responsibility.

After attending the program the following learning outcomes are achieved:

- Improved understanding of road safety issues as drivers and passengers and development of strategies to reduce distractions and eliminate risks.
- Greater insight into their personality risk profile and mindset and how this can influence and affect their driving and reactions (e.g. speeding when feeling rushed).
- Development of personal road safety strategies and self-monitoring of actions.
- Understanding of the Safe Systems approach and the ability to identify government, community and personal responses to prevent crashes and/or reduce their severity.
- Improved understanding of their rights and responsibilities as a driver by learning about the protective measures of the Graduated Driver Licensing System.
- Increased road safety education by learning practical elements of car safety features (e.g importance of seatbelts, good tyres, and ANCAP safety rating system).
- Increased understanding of the relationship between speed and stopping.
- Increased strategies around planning car trips and managing mood.
- Increased understanding of the special challenges faced by other road users (heavy vehicles and vulnerable road users) and development of strategies to anticipate and accommodate the actions of others.

Road Safety Education's RYDA program is an essential learning experience for senior high school students that aims to change the way young people think and act on the road not only as drivers but also as passengers and encourages them to make better decisions. By teaching a cohort from a school at once we are also reinforcing these messages to a peer group who often will be driving and socialising together.



STUDENT WELLBEING

RYDA is a youth development program which has been designed by education experts to not only teach youth responsibility on the road but also foster global citizenship and social responsibility.

Self-awareness is a theme taught throughout. Students learn to understand their personality risk profile and how this impacts their behaviours. Techniques to identify their mindstate and mood are also explored and strategies developed to help students to mitigate negative outcomes. The program builds resilience in a number of life-skills, such as strengthening personality areas that leave students vulnerable to risk, and practicing speaking up in a dangerous situation.

RYDA also seeks to **increase empathy** towards others through discussions and activities on vulnerable road users, challenges faced by other drivers and face to face interviews with crash survivors. These impactful sessions repeatedly emphasise the long-term impacts of behaviours personally and on others.

Evidence of the holistic impacts on wellbeing and the long-term implications on behaviours is expressed in our post survey student feedback:

"So meaningful and encourages me to be more careful and considerate on the road and off. I was also reminded that I was not invincible and neither is anyone else"

"The concepts seemed to have a lot of implications in real world situations and were easy to apply to my own driving"

"I learnt valuable self coaching tips that could help me when driving. We were shown how we could speak up if we weren't comfortable as a passenger in the car or how to say no when asked if we can give someone a ride on our restricted. It was good because I think I will definitely be needing these skills in the future and could relate to these scenarios"



PROGRAM EVALUATION

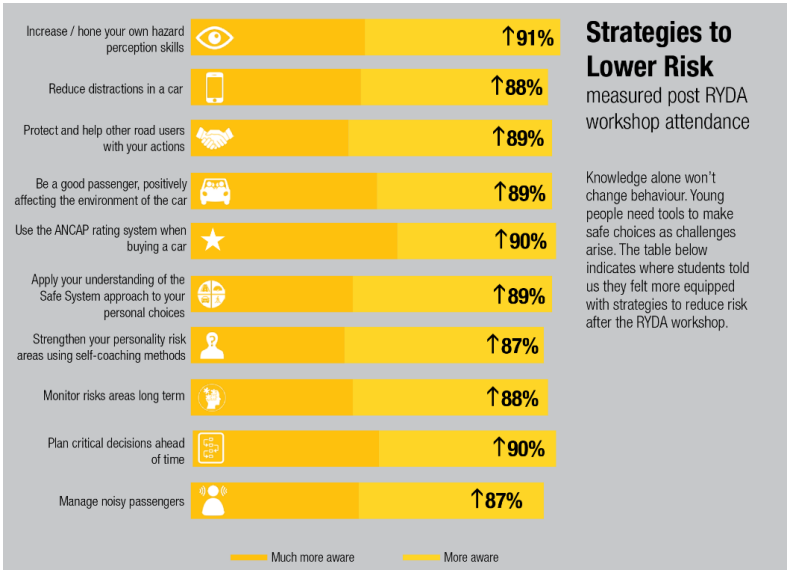
As a "top of the cliff" charity, it can be challenging to measure outcomes - how do you measure a good decision? We conduct regular and robust program evaluation designed to measure knowledge retention, attitude shift and intended and practiced behaviour change across time. We employ a number of evaluation tools, including post workshop surveys, open feedback, teacher and parent surveys. In 2023, over 4,000 stakeholders participated in our evaluation. We also report student evaluation which compares results from the same students pre, immediately post and three months post workshop attendance collected in 2022.

Evaluation results:

Based on the theory of change, the key findings from our surveys highlight that RYDA is a highly impactful experience for students. It produces substantial increases in understanding of road risk factors, such as; speed, following distance, distractions, car safety features, hazard perception, and the role of personality and mind-state.

Students obtain and retain new knowledge: our evaluation tools tell us that before participating at RYDA workshops, students grossly underestimate the impact of risk in key areas. Retained knowledge (measured three months post workshop), virtually doubles to 73%.

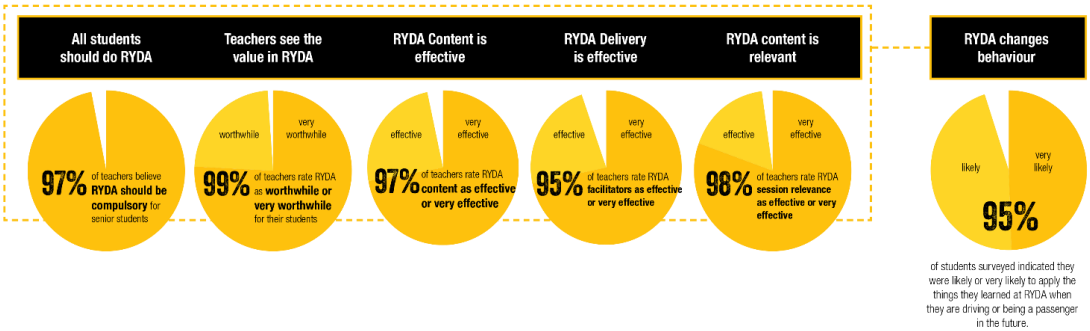
Attitudes leading to behaviour change is also measured as students are motivated to pursue RYDA e-learning opportunities back at school and put into practice out on the roads, RYDA's life-saving strategies.



RYDA is an evidence–led resilience programme and complies with best practice government guidelines and incorporates the characteristics of a longitudinal (13 years) study.

We are seeing that teachers are getting more confident in teaching road safety and using our resources more back in the classrooms which are improving our 3 month post retention and adoption of strategies as seen above.

The evidence is strong that RYDA is an effective intervention and positively contributing to the governments quest for zero fatalities. RYDA is a product that research demonstrates reduces deaths and serious injuries.



OUR DRIVE COACH PROGRAMME

Piloted in 2023 our new complimentary parent/caregiver program is called DRIVE COACH. The program builds on our whole school approach to now extend into the school community reaching families, parents and caregivers. The aim of the program is so young people starting the driving process feel supported in their positive decisions around road safety, everyone shares an understanding of the importance of road safety and helps families to help improve outcomes for their young person.

Research shows when parents/caregivers engage with their teens through the learn-to-drive journey this can have a significant impact when it comes to creating safer drivers who take less risks.

Our DRIVE COACH program has the following outcomes:

- Increase knowledge on how the teenage brain works and the best approach to road safety education.
- Identify how parents/caregivers can support their child as a learner driver - covering topics like lesson structure, commentary driving, instruction vs coaching and what to look for in a driving instructor.
- Outline and explain the graduated licencing system and discuss the role of parents/caregivers once their teen is driving solo.
- Outline core safety issues for young drivers.
- Choosing a safe vehicle for your young driver - explaining the ANCAP stars.

Helping parents support and build on their child's RYDA experience.

Feedback from parents participating in FY2024 has been extremely positive. 100% of participants rated the program above 7 out of 10 in meeting their personal objective from attending the session, including 47% who stated it completely met expectations.

Parent/Caregiver comments included:
"Very glad I attended given the challenges of teaching your child to drive."

"Was a good session. Such an important session to help improve our kids safety."

"I enjoyed the night and found it helpful."

"It was good!! The hour went fast so must have been good!!"

"Great session. Well structured"

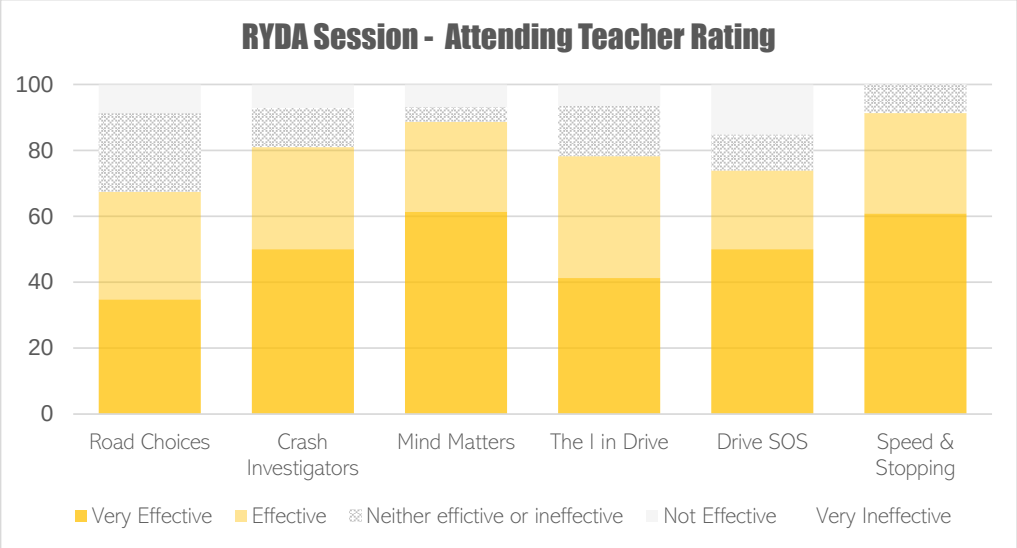
LOCAL FEEDBACK – ORANGE LGA

Road Safety Education provided our RYDA program to 456 students from 7 Orange LGA schools in 2024. Feedback below is from teachers and students from the schools who participated in these workshops.

TEACHER EVALUATIONS

The feedback received from staff attending RYDA in 2024 showed that 91% of teachers found our program **"worthwhile"**, including 71% who found it **"very worthwhile"**. 88% of staff stated that RYDA should be **compulsory** for all secondary school students. 90% of teachers attending also reported personal changes as a result of accompanying students to the workshop. All noted an "increased awareness of road safety issues" and "Personal satisfaction from helping learner drivers to be safer on the road".

We ask teachers to rate facilitator performance, session content and relevance from 1 to 5 (5 being very effective and 1 being very ineffective). **2024 Orange LGA teachers who attended RYDA told us:**



Below are quotes noted on teacher evaluation forms received after the Orange region Program:

"Resources are excellent."

"This is a wonderful community service."

"Was a very informative day."

"Kept delivery engaging = mix of activities."

"Very good day that gives more info and perspective on safe driving."

"Excellent content well facilitated."

"Resources and content is great"

"Really important learning for students"

"An invaluable course, thank you very much for today, I appreciate your time"

"I would strongly recommend that schools provide an opportunity to engage in the course with students of a relevant age"

"Thank you very much for all of the time Rotary, Police, Volunteers and David that has been invested in our students."

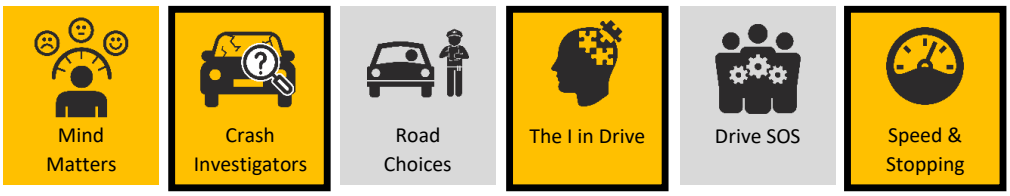
"I think students got a lot out of the program and enjoyed it"

"Such a worthwhile day"

STUDENT EVALUATIONS

After every program we ask students to complete our online surveys. We utilise the **learning outcomes** to help us evaluate and develop our program and sessions, and to enable us to make the most impact on the youth we contact.

Students were asked **which of the six workshop sessions impacted them the most** and the reason for this decision. The top three across the country are highlighted with a black border and **top three in Orange are highlighted yellow**. We've picked out a few entries from student feedback below.



Most impactful session:	*Reason for choice:*
Crash Investigators	*I found it interesting to be able to assess the crash factors and break down the reasoning behind it to learn how to prevent the same thing happening to me*
Speed & Stopping	*I saw how long it takes to brake when driving at different speeds and how to see if your tyre tread is worn down and unsafe*
Speed & Stopping	*I could physically see a real car stop and the distance that it goes from full speed to stop*
Speed & Stopping	*It was really engaging and interactive and everyone got involved as we tried to guess where the car would stop when emergency braking at different speeds*
Speed & Stopping	*We got to see real life examples of stopping at particular speeds why speed is important for road safety*
Road Choices	*Talking to the police officer was eye opening*
Speed & Stopping	*I enjoyed seeing the reality of how much further cars really stop depending on their speed. It shows how much speeding can be a big impact on an accident*

Speed & Stopping	*It allowed us to really engage in the session through the driving example. It showed to impact of speed and how long it takes to stop the vehicle. I realised that it was a lot further than expected and the importance of school zone speed limits*
The I in Drive	*The facts were really interesting. I also liked how interactive it was with the quiz and making our own choices. I learned a lot from it and found the videos to be very engaging!!!*

Students were asked what was **"the most useful strategies/pieces of information from RYDA"**, below are responses from Orange LGA students:

Be focused on the broad view not focus on little things at a time, like using peripheral vision to see pedestrians whilst still looking at the road
That when your speed doubles, the time and distance it takes to stop quadruples
Talking on the phone takes away 40% of the mental resources you need for driving
To always make the right choice whether your the driver or the passenger because one wrong move can cause more damage than you think
How what mental state you are in can really effect your driving ability
That if your tyre is at the bump on your tyre it's too worn down and you need to replace them
Learning about trucks blind spots, and how you need to help them but staying out of turning lanes etc, because they may not see you and need space to move
Realising your headspace before driving a car. I think your mood really impacts how you are driving so being able to stop and identifying it before putting yourself in a dangerous situation is really important. I will definitely be using whilst completing my 120 hours and continue it after that
Commenting while you are driving to get a bigger awareness of the surroundings

Thank you for taking the time to consider our funding application. Please contact us if you need any further information to assist with our request.

With your support we hope to grow the program providing more young people with our road safety messages and contributing towards safer drivers on our roads.



RYDA BUDGET FOR ORANGE CITY COUNCIL LGA REGION
FY2025

Forecast	
Schools currently working with in region:	**Student numbers:**
Anson Street School	10
Canobolas Rural Technology High School	25
James Sheahan Catholic High School	120
Kinross Wolaroi School	130
Orange Anglican Grammar School	40
Orange Christian School	15
Orange High School	130
Total Students impacted:	**470**
Total Workshops estimated:	**4**

INCOME			
Police Facilitator In-Kind Support	One Police Officer per workshop @ $250	$	1,000
Transport for NSW	$10 per student	$	4,700
School Contributions	$10 per student	$	4,700
RSE Contribution/Other Grants		$	2,705
TOTAL INCOME		**$**	**13,105**

EXPENSES			
Facilitator fees	7 required per workshop + Day Manager	$	8,000
Venue Hire	Towac Park Racecourse	$	1,800
Catering for Facilitators, Volunteers and Teachers		$	1,500
Workshop resources	Student workbooks, wristbands and Teacher compendium	$	553
Program Coordination - School Coordination	5 hours per school @ $30	$	1,050
Program Coordination - Workshop Coordination	10 hours per workshop @ $30	$	1,200
Program Development and Evaluation		$	1,502
TOTAL EXPENSES		**$**	**15,605**

SHORTFALL REQUESTED FROM ORANGE CITY COUNCIL	**$**	**2,500**

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation: ANSMA Australian National Street Machines.

Contact name: George Georgiou

Position: Life member

Postal address

Phone: Mobile:

Email:

ABN (if applicable): 48452744114. ACN (if applicable):

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

ANSMA is a democratically elected not for profit association whose aim is to co-ordinate & promote the activities a street machine clubs & individual street machiners who are members of or are affiliate by way their club's membership of ANSMA

YOUR REQUEST

Amount requested: $ ~~$890~~ ~~$800.00~~ ~~$445.00~~

Date event if applicable: 8th & 9th March 2025. 13th & 14th September 2025

What round are you applying for? ☐ Round 1 ☐ Round 2 ☑ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

No.

What will this donation be used for?

Hire cost of the grounds for 2 Days. - on 13th & 14th September 2025 - Car Swap Meet.

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

Attraction of tourists, spending money in town, last show was attended by 1200 approximately. This has been run SMC

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Advertising	$ ~~800.00~~ 500.00
Staffing	$ 300.00
	$
	$
	$
Total costs	$

FUNDING

Your contribution	$ 800.00
Funding from other councils	$ —
Contribution from other sources	$ —
Total funding	$

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable) ~~AS~~ ANSMA

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 11/9/2024.

Print name George Georgiou

Position in organisation Life Member ANSMA.

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Orange Running Festival, hosted by the Orange Runners Club
Contact name:	Sue Klose
Position:	Assistant Event Coordinator
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
51 281 941 684	

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Orange Runners Club was formed in 1978 and is the second oldest and one of the largest running clubs outside of the Sydney metropolitan area, averaging 400 members in recent years. The Club is affiliated with Athletics NSW.

Orange Runners Club welcomes runners and walkers of all ages and abilities to weekly scheduled runs including Sunday runs of various lengths on courses around the Orange area, and timed runs on Wednesday afternoons at Elephant Park. Runs typically attract 60-100 runners each week. The club actively encourages members to run regularly at club runs as well as to train for a wide range of running events, often participating as a group. Members include new runners, casual runners and walkers of all ages and many very competitive runners up to the elite level.

Orange Runners Club hosts the Orange Running Festival in March each year. Orange Running Festival is now in its 19th year and has become one of the largest regional running events in NSW. In recent years, nearly 2,000 runners have entered one of nine races, with many of the race events selling out. The event receives significant support from the local community including more than a dozen sponsors, RFS, Scouts, and many local school teams. Orange Running Festival attracts approximately 1,000 visitors to Orange each year including many outside the existing food and wine segment. A summary of visitor feedback and economic impact is included with this application.

YOUR REQUEST

Amount requested: $ 2,500 Date event if applicable: 9th March 2025

What round are you applying for? ☐ Round 1 ☑ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

Orange Running Festival receives financial sponsorship support from approximately one dozen local businesses including Our City Real Estate, The Athlete's Foot, Cook & Roe, Race Track Car Wash and many others. In kind support is expected from several local organisations including Kennards, Midwest Traffic Management, John Davis Motors and other suppliers.

What will this donation be used for?

The grant funding will enable Orange Running Festival to maintain our low registration fees for our shorter events (2K, 5K and 10K) targeted to local families while enabling us to cover operating costs including cost increases expected for 2025. Costs for each entrant include medals ($7 each), race bibs, timing services and overall event services including insurance, traffic management and food & drink for participants.

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

Each year, the running festival attracts approximately 1,000 local participants along with 1,000 visitors, accompanied by friends and family. The event represents a fun and active day out for all participants at an attractive price. In addition, visitation brings in an estimated $250,000 in local revenue. Please see the attached analysis of 2024 visitor feedback and impact for additional details.

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Event Management (Hire Equipment, Contractors, Medals, Trophies, Signage and Other)	$ 44,044
Race Management (Timing System, Race Bibs, Traffic Management, Prizes, Drink Station Supplies)	$ 21,909
Marketing (Posters, Handouts, Social Media, Radio Advertising) $5,600	$
Donations to Community Groups providing volunteers (RFS, Scouts, School Groups) $41,270	$
	$ 108,822
Total costs	$ 108,822

FUNDING

Your contribution	$ 92,231
Funding from other councils	$ 0
Contribution from other sources	$ 26,600
Total funding	$ 118,831

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**



This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built environment**



This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**



This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**



This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Sue Klose Digitally signed by Sue Klose Date: 2024.09.23 17:16:52 +10'00' Date 24 Sept 2024

Print name Sue Klose

Position in organisation Assistant Race Coordinator

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Orange Eight Day Games - King and Queen of Sport
Contact name:	Jason Lyne
Position:	Hon. Secretary
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):

YOUR ORGANISATION

☑ Not-for-Profit ☑ Community Group

Please provide a short description of your organisation, and its purpose.

The Orange Eight Day Games King and Queen of Sport is an annual event held in Orange and surrounding areas for during November (16th - 23rd November this year). We give the opportunity to individuals to try their hand at many sports & activities around the city using council grounds, sporting clubs and community organisations primarily. There are no restrictions on our event with the only stipulation competitors must be over 18 years of age. In recent years we have had competitors in their mid-70's successfully complete the week.

In recent years we've added another category, offering people with disabilities the opportunity to join us for the week where they could participate in activities not normally easily accessible to them. This was a great success with everyone competing together and competitors building friendships during the course of the week, that continue to remain strong at the completion of the weeks end. It is something we will be continuing moving forward each year moving forward.

YOUR REQUEST

Amount requested: $ 2000 Date event if applicable: 16th-23rd November 2024

What round are you applying for? ☐ Round 1 ☐ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suopliers, please provide details:

What will this donation be used for?

The 2024 Committee began preparations for this year's event to be run between Saturday 16th November inclusive until Saturday 23rd November with all clubs and organisations we've used in the past committing in allowing us to use their services and facilities. We intend to run with 30 participants in the King and Queen categories (60 in total) with our Parasport competitors on top of these numbers.
Council funds will be utilised to assist with the following:
* Printing and Stationary
* WHS - Routine and Preventative Maintenance to equipment used during the week (to be completed prior to the event commencing)
* Signage promoting the event which will include Council Logo in all signs
*Contribute towards prizes at the completion of the weeks end at the formal presentation night with a council delegate invited to attend as always

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

We are an event that has been running for 47 years (was consecutive until the Covid pandemic) by volunteers where members of the community are given the opportunity to try different sports, activities or skills during the 8 days.
The week long event is a great opportunity for people to participate in both outdoor and indoor activities they wouldn't normally attempt or realise were available to them in town.
We are an event that prides ourselves on inclusiveness and with the ongoing challenges of mental health issues in the community, feel our event is a positive for people through meeting others or just being outside their normal everyday doing different activities.

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Prizes, Trophies and presentation Night Costs	$ 10,125.00
Repairs and Maintenance,Equipment/Printing and Stationary	$ 1754.00
Public Liability and Insurance Costs	$ 1450.00
Event Venue and Hire Costs	$ 2934.00
	$
Total costs	$ 16,263.00

FUNDING

Your contribution	$ 8200
Funding from other councils	$ 0
Contribution from other sources	$ 6500
Total funding	$ 14700

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: [redacted] Account No: [redacted]

Account Name: [redacted]

Bank: [redacted]

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable) Oramge Eight Day Games

☐ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed [redacted] Date 9.9.24

Print name Jason Lyne

Position in organisation Hon. Secretary

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Orange Bush Nippers
Contact name:	Adam King
Position:	President
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
19 300 203 822	

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Orange Bush Nippers is a volunteer organisation supporting the local community of Orange and the surrounding areas by providing a fun and exciting way for children and young people to become Nippers and learn water safety. As these young Nippers grow and develop their confidence, skills and abilities Orange Bush Nipper volunteers guide and train them, and quite often their parents, in gaining First Aid, Advanced First Aid, Surf Rescue Certificates (SRC) and Bronze Medallion certification (among others). These skills are then utilised on a volunteer basis throughout the Orange community, providing first aid and water safety at specialised events such as the Orange Triathlon. Orange Bush Nippers operates under the principle of being inclusive and accessable to as many young people as possible. To enable this we strive to keep our registration fees as low as possible.

YOUR REQUEST

Amount requested: $ 2,500 Date event if applicable:

What round are you applying for? ☐ Round 1 ☑ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

N/A

What will this donation be used for?

The annual cost to run the club exceed the revenue generated from registration fees, in addition to this the club requires additional cash on hand to enable ording of equipment and clothing, which the club sells at cost to ensure that it is accessable. The donation would be used to offset costs associated with running the club. This includes Lane Hire at the Orange Aquatic Centre, Trailer Registration and costs associated with our website hosting and presentation day.

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

Orange Bush Nippers promote a healthy and active community which use and promote the excellent recreational facilities available in Orange like the Aquatic Centre, Lake Canobolas and Gosling Creek bringing over 100 members from Orange and the surrounding region to these facilities each week. The skills gained by our nippers has a long lasting benefit as they take these skills into their teenage/adult years continuing to promote water safety and community spirit through

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Lane hire at Orange Aquatic Centre (in-kind support for council		$ 500.00
Presentation Day		$ 1,250.00
Trailer Registration		$ $100.00
Website hosting and administration.		$
Meeting costs	$400.00	$
Total costs		$

FUNDING

Your contribution	$ Nil
Funding from other councils	$ Nil
Contribution from other sources	$ Nil
Total funding	$ 2,500

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 4 October 2024

Print name

Position in organisation President

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Midstate Budgerigar Club Inc.
Contact name:	Garry Pymont
Position:	Secretary
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):

Orange City Council
Scanned
17 OCT 2024
CONTAINER No.
F2709-25

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

We are a club affiliated with the state and national budgerigar associations . We try to help new comers to the hobby and conduct an annual show as well as participateing in the state teams competition and national budgerigar show . We are applying for a grant for our annual show [which has been held in Orange for over 40 years] on November 2nd at the Orange Show Ground .

YOUR REQUEST

Amount requested: $ 2000.00 Date event if applicable: November 2nd

What round are you applying for? ☐ Round 1 ☐ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

We have a number of sponsers assisting the club

What will this donation be used for?

We are offering over $2000 in cash prizes as well as the cost of accomodation and travellin for 3 Judges . We have an expanded schedule this year and have more awards than before .As well as the cash we have approx. $800 of awards provided by sponsers .

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

As well as the 3 motel rooms booked for our judges a large number of exhibiters will be staying in accomodation [some already booked] , on the Friday night we have booked a function at the Services club that will be well attended . Typically the partners of judges and exhibiters will usually go shopping and sight seeing while the show is on .

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Venue hire	$ 237.60
Judges accomodation and travelling and food	$ 1200.00
Cash prizes	$ 2100.00
Stationery printing etc.	$ ~~2100.00~~ 150.00
	$ ~~3687.60~~
Total costs	$ 3687.60

FUNDING

Your contribution	$ 1687.60
Funding from other councils	$
Contribution from other sources	$
Total funding	$ 1687.60

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: [redacted] Account No: [redacted]

Account Name: [redacted]

Bank: [redacted]

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☐ **PRESERVE: Balancing the natural and built *environment***

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☑ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable) Midstate Budgerigar Club Inc.

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed [redacted] Date ~~10~~ 15 / 10 / 2024

Print name Garry Pymont

Position in organisation Secretary

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.



ANNUAL SHOW

This show is for *ANY AGE, PLATINUM YOUNG, OPEN YOUNG, INTERMEDIATE YOUNG, NOVICE YOUNG AND JUVENILE BIRDS plus Pairs, Teams and Collection*

WHEN: **SATURDAY 2nd November 2024**

WHERE: Orange Showground, Leeds Parade – Main Pavilion
Enter Main Gates Leeds Parade, Exit via Phillip Street

PHONE ENTRIES: Thursday 31ST October 6pm - 9pm - 0427401267

EMAIL ENTRIES: Accepted from Sunday 27th to Thursday 31st October to be sent to midstatebudgerigarclub@gmail.com

****No late entries will be accepted****

COST: $1 per cage – maximum entry fee $10 per exhibitor

An ONLINE AUCTION of members birds via "32 Auctions" is being conducted in the weeks prior to the show.

Successful bidders may make their own arrangements for transportation of birds, or they can be collected from the Show.

A huge thank you to the members of Mid State Budgerigar Club for their fantastic donation as this is our main fundraising effort for the year.

GENERAL INFORMATION

MID STATE CLUB members extend their **thanks and appreciation to our MAJOR SPONSORS:**

BLOODWOOD WINES **BIRD BOXES GALORE**

CANOBOLAS EGGS

The Club will take all care but no responsibility for any loss or damage to any exhibit or equipment

A BBQ breakfast & lunch will be on sale, morning tea will be available free of charge. Exhibitors will each receive 1 free sandwich voucher for lunch

EVENING GET TOGETHER

Please advise at time of entries if you will be joining us for a social get together on Friday night starting at around 6.00 pm at the Orange RSL Club, 231-243 Anson St, Orange.

STAYING IN ORANGE

There are many quality hotels/ motels in Orange. Those that are within walking distance from the RSL Club are:-

Metropolitan Hotel, 107 Byng St.	ph 02 6362 1353
Town Square Motel, 246 Anson St,	ph 02 6369 1444
Mecure, 94 Byng St	ph 02 6362 5611

****All young birds to be rung with an ANBC 2023 (blue) ring and Juvenile birds to be rung with an ANBC 2024 (Red) ring ****

All birds must be **owned and bred** by the exhibitor.

Floor of cages to be covered with an approved BSNSW seed mixture

SHOW MANAGER
Perc Anlezark

JUDGES – Gary GAZZARD, James MATTHEWS and Chris DRUERY

BENCHING and COLLECTION OF BIRDS

All birds to be benched by 9.00am on the day of the show and collection of birds will be approximately 2.00pm

SHOW RULES
This show will be conducted under the rules of the BSNSW INC.

SPECIAL AWARDS

- **Lucky Door Prize for Novice & Intermediate Exhibitors at this show**
  Pair of birds donated by **G & D Pymont**
- **Ray Welshman Memorial – Best Normal Grey Green in Show**
  Donated by **Bird boxes Galore**
- **Barry Whalan Memorial Best Normal Grey in Show**
- **Cash Prize $30 Best bird YOUNG in each variety**
- **Judges Choice Quality bird unlucky on the day**
  $50.00 donated by **Rob Peffer/Canobolas Eggs**

MAJOR AWARDS

Grand Champion	$150 Cash, 6 Pack donated by Bloodwood Wines (approx. $250) and Bird Boxes Galore $100 Voucher
Champion Opposite Sex in Show	$100 cash
Champion Young Bird in Show	$100 cash
Champion Any Age	$100 cash plus a prize donated by Bloodwood Wines
Champion Opposite Sex Any Age	$50 cash
Champion Open Young	$100 cash plus a prize donated by Bloodwood Wines
Champion Opposite Sex Open Young	$50 Cash
Champion Platinum Young	$100 cash plus a prize donated by Bloodwood Wines
Champion Platinum Young Opposite Sex	$50 cash
Champion Intermediate	$100 cash plus a prize donated by Bloodwood Wines & Midstate medal
Champion Opposite Sex Intermediate	$50 Cash
Champion Novice	$100 cash plus a prize donated by Bloodwood Wines & Midstate medal
Champion Opposite Sex Novice	$50 Cash
Champion Juvenile	$100 cash plus a prize donated by Bloodwood Wines
Champion Opposite Sex Juvenile	$50 Cash
Best **Young** Bird in Each Variety in Show	$30 Cash
Best Overall Bird in Each Variety in Show	Certificate
Best Pair/Team or Collection	$20 Cash
Barry Whalan Memorial Best Normal Grey in Show	$50 Cash
Ray Welshman Memorial – Best Normal Grey Green in Show	$50 Voucher donated by Bird Boxes Galore
Judges Choice Quality bird unlucky on day	$50.00 donated by Rob Peffer

SCHEDULE OF CLASSES

VARIETY	ANY AGE		YOUNG BIRDS								ANY STATUS JUVENILE 2024 RUNG	
			PLATINUM 2023 RUNG		OPEN 2023 RUNG		INTERMEDIATE 2023 RUNG		NOVICE 2023 RUNG			
	Cock	Hen	Cock	Hen	Cock	Hen	Cock	Hen	Cock	Hen	Cock	Hen
Normal Green ASC	1	101	201	301	401	501	601	701	801	901	1001	1101
Normal Grey Green	2	102	202	302	402	502	602	702	802	902	1002	1102
Normal Blue ASC	3	103	203	303	403	503	603	703	803	903	1003	1103
Normal Violet	4	104	204	304	404	504	604	704	804	904	1004	1104
Normal Grey	5	105	205	305	405	505	605	705	805	905	1005	1105
Normal Yellow Face Blue ASC	6	106	206	306	406	506	606	706	806	906	1006	1106
Normal Aust. Golden Face Blue ASC	7	107	207	307	407	507	607	707	807	907	1007	1107
Black Eyed Self Colour ASC	8	108	208	308	408	508	608	708	808	908	1008	1108
Dilute ASC	9	109	209	309	409	509	609	709	809	909	1009	1109
Lutino	10	110	210	310	410	510	610	710	810	910	1010	1110
Albino	11	111	211	311	411	511	611	711	811	911	1011	1111
Dark Eyed Clear ASC	12	112	212	312	412	512	612	712	812	912	1012	1112
Clearwing ASC	13	113	213	313	413	513	613	713	813	913	1013	1113
Greywing ASC	14	114	214	314	414	514	614	714	814	914	1014	1114
Cinnamonwing ASC	15	115	215	315	415	515	615	715	815	915	1015	1115
Spangle Double Factor ASC	16	116	216	316	416	516	616	716	816	916	1016	1116
Opaline (Normal) ASC	17	117	217	317	417	517	617	717	817	917	1017	1117
Opaline AOSV / ASC	18	118	218	318	418	518	618	718	818	918	1018	1118
Clearbody ASV /ASC	19	119	219	319	419	519	619	719	819	919	1019	1119
Lacewing ASV / ASC	20	120	220	320	420	520	620	720	820	920	1020	1120
Fallow ASV / ASC	21	121	221	321	421	521	621	721	821	921	1021	1121
Spangle (Normal) ASC	22	122	222	322	422	522	622	722	822	922	1022	1122
Spangle AOSV / ASC	23	123	223	323	423	523	623	723	823	923	1023	1123
Dominant Pied ASV/ASC	24	124	224	324	424	524	624	724	824	924	1024	1124
Recessive Pied ASV/ASC	25	125	225	325	425	525	625	725	825	925	1025	1125
Saddleback ASC	26	126	226	326	426	526	626	726	826	926	1026	1126
Darkwing ASV /ASC	27	127	227	327	427	527	627	727	827	927	1027	1127
White Cap ASV / ASC	28	128	228	328	428	528	628	728	828	928	1028	1128
Crested ASV / ASC	29	129	229	329	429	529	629	729	829	929	1029	1129
Non-Standard NSV /NSC	30	130	230	330	430	530	630	730	830	930	1030	1130
Pairs	1200	ASV / ASC - Any Age, Cock and Hen each of the Same Variety & Colour										
Teams	1300	3 Birds of the **same STD Colour, Variety and Sex**										
Collections	1400	AA, One Sex, 3 different STD Varieties, **Same STD Colour**										

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Springside Progress Association
Contact name:	Robyn Murray
Position:	President
Postal address	,
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

The Springside Progress Association (SPA) are Crown Land Managers for the Springside Schoolhouse, built in 1878 from bricks quarried on site, one of the first schools in the area. It no longer operates as a school but is a focal activity point for this rural community. It is located 10 km south of Orange in Orange LGA, and is the only community building catering for around 150 farms. SPA has supported the restoration and maintenance of this historic schoolhouse/ schoolmasters residence for over 20 years with a dedicated membership/volunteer base. In the last 2 years, for instance membershave contributed over 100 hours in-kind work to restore the hall to its original condition and to maintain the historic fabric of the buildings. While there is rent from residence it has to cover rates, agent fees, maintenance (eg water tanks, carpet, heating) so extra funds are required.

YOUR REQUEST

Amount requested: $ 2,500 Date event if applicable:

What round are you applying for? ☐ Round 1 ☐ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

n/a

What will this donation be used for?

This funding relates to a quote from Orange & District Floor Sanding and Carpentry of $4,389 (inc GST). While the SPA volunteers have done most of the work in the Schoolhouse hall to bring it back to its historic condition, the floor which is the original wide cypress timbers requires specialist attention. We want to ensure it is finished well. The sander will ‘ nail punch and fill nail holes and fill bits throughout the floor. Then sand and finish in Loba Duo 2 pack water base clear Matt finish. ’

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

The Schoolhouse performs a vital ‘ bringing together ’ role for not only the immediate Springside community but several other wider community groups. It is an iconic part of local history and the Orange LGA that is at risk of being lost without further support beyond our small band of dedicated volunteers. Funding will benefit local Orange tradesmen.

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

Quote from Orange & District Floor Sanding and Carpentry (inc GST)	$ 4,389.00
Contingency funds for any extra products required	$ 111.00
	$
	$
	$ 4,500
Total costs	$ 4,500

FUNDING

Your contribution	$ 2,000
Funding from other councils	$
Contribution from other sources	$
Total funding	$ 2,000

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☑ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☑ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☑ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable) Springside Progress Association

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 23/10/2024

Print name

Position in organisation President

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

SMALL DONATIONS PROGRAM - APPLICATION FORM

General donations

Community or not-for-profit group providing benefit to the local community can apply for a maximum of $2,500

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation: FRIENDS OF BANJO PATERSON PARK INC

Contact name: ELIZABETH GRIFFIN

Position: PRESIDENT

Postal address

Phone: Mobile:

Email:

ABN (if applicable): ACN (if applicable):

YOUR ORGANISATION

☒ Not-for-Profit ☒ Community Group

Please provide a short description of your organisation, and its purpose.

Our aim is to promote Banjo Paterson birthplace as a local and national tourist attraction

YOUR REQUEST

Amount requested: $ 2500 Date event if applicable: 16/17 FEB 2025

What round are you applying for? ☒ Round 1 ☐ Round 2 ☐ Round 3 ☐ Round 4

If you have attempted to seek funding for this project from any other source,including other grants, requests for in kind donations or reduction in costs from suppliers, please provide details:

No

What will this donation be used for?

POETRY COMPETITION FOR ADULTS + JUNIORS
HISTORY IN THE PARK. (BBQ).

BENEFIT TO ORANGE

Please outline how the donation will contribute to the social, economic and/or environmental wellbeing of the Orange Local Government Area.

Draw people to Orange for an event. - Promotion of the city, accomodation, retail

COSTS AND FUNDING

Please provide a summary of your event costs and funding sources. For equipment purchase, please attach quotes.

COSTS

POETRY COMPETITION – ADVERTISING, PRINTING	$	
TROPHIES, PRIZES	$	1,500
	$	
CELEBRATION OF BANJO'S BIRTHDAY	$	
ADVERTISING, PRINT OF BOOKLETT, EQUIPMENT	$	
Total costs MICRO PHONES, RENT OF EXTRA TOILET	$	4,000

FUNDING

Your contribution VOL. HOURS.	$	1,575
Funding from other councils	$	NIL
Contribution from other sources	$	NIL
Total funding	$	4,075.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

ALIGNMENT TO COUNCIL'S COMMUNITY STRATEGIC PLAN

Which theme/s best match your reason for donation?

☒ **LIVE: A healthy, safe, inclusive and vibrant community**

This theme recognises the importance of encouraging healthy lifestyles, community pride and a sense of belonging.

☒ **PRESERVE: Balancing the natural and built environment**

This theme ensures that the unique natural, cultural, social and historical aspects of our community are preserved while recognising the need for growth and improvement.

☐ **PROSPER: A smart, innovative and resilient economy**

This theme focuses on providing the community with positive choices for investment, employment and study.

☐ **COLLABORATE: Leadership and partnership**

This theme looks at forging a collaborative community that engages with open and ongoing decision making.

DECLARATION

On behalf of: (name of organisation if applicable)

☒ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 28th OCT 2024

Print name ELIZABETH BRIFFIN

Position in organisation PRESIDENCE

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

5.13 APPLICATIONS FOR EVENT SPONSORSHIP

RECORD NUMBER: 2024/1667
AUTHOR: Tony Boland, Industry & Business Engagement Lead

EXECUTIVE SUMMARY

This report provides information to Council so it may consider applications through Council's Event Sponsorship Program.

During the caretaker period Council received 5 event sponsorship applications. One application did not meet the criteria for Sponsorship due to being a Business Event which are not eligible for sponsorship under this policy. Council will contact the organisers with options for Council provide support though other avenues available.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "12.2. Develop and attract a variety of events, festivals, venues and activities for locals and visitors, ensuring accessibility for all".

FINANCIAL IMPLICATIONS

The budget for the Event Sponsorship Program is $100,000 for the financial year. The summary of commitments and expenditure is at Table one below. The column titled 'Eligible Applications Received' is not the value recommended by staff as there are insufficient funds remaining this Financial Year. The value recommended by staff is $17,000 which would almost fully expend this year's sponsorship program budget. If Council supports these funding recommendations the program will be closed to the public for the remainder of this Financial Year.

Table One: Event Sponsorship Program – Financial summary table

Annual Allocation	Committed from previous years	Already approved in 2024/25	Balance available	Eligible applications received	Committed for 2025/26
$100,000	$21,600	$61,050	$17,350	$30,000	$10,000

POLICY AND GOVERNANCE IMPLICATIONS

Events Sponsorship Program Policy ST144 is applied by staff to determine if the application is compliant with the Policy. The application is usually submitted to Council via the Finance Policy Committee, with a comment from staff about areas of non-compliance (if applicable). Occasionally these reports go directly to Council due to the urgency of the approval.

Councillors may also decide to fund an event for an amount other than requested if so desired.

The Events Sponsorship program is managed in accordance with Section 356 of the Local Government Act 1993. One of the applications is submitted to Council from a private entity and is permissible under the Event Sponsorship Program Guidelines, and is able to be approved without going to public exhibition in accordance with Section 356(3)(a-d) of the Local Government Act 1993. The default position for applications of this nature (if approved)

is to consider the application approved without public exhibition unless Council specifically resolves to go to public exhibition.

RECOMMENDATION

1 That this item be heard and voted on *in seriatim*.

2 That Council determines the following applications:

1. **To sponsor $5,000 to Zolere Enterprises Pty Ltd for the 2025 A Night in Nashville on 15 March 2025.**
2. **To sponsor $5,000 to the Orange Bridge Club to hold the 2025 CWF Gold event from 10-13 April 2025.**
3. **To sponsor $1,500 to the Orange City Bowling Club for the Golden Eagle Classic from 23 to 27 February 2025.**
4. **To sponsor $5,500 to FOOD Week Inc to hold the 2025 Orange FOOD Week event from 28 March to 6 April 2025.**

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

The approved applications for event sponsorship approved in the 2023/24 and 2024/25 financial year can be found at Table 2.

Table 2: Assistance provided in 2023/24 and 2024/25 to date.

Evented	Requested in 2023/24	Approved in 2023/24	Requested in 2024/25	Approved in 2024/25	2024/25 Spend per Visitor Ratio
*Careers and Trade Expo **	*$1,500*	*$1,500*	*$1,600*	*$1,600*	1:10
*Gnoo Blas **	*$10,000*	*$10,000*	*$10,000*	*$10,000*	3:1
*Orange Show **	*$10,000*	*$10,000*	*$10,000*	*$10,000*	4:1
Orange Regional Arts Foundation	$10,000	$5,000	$,5000	$5,000	25:1
Rural Womens Gathering	$2,000	$2,000			
Goodness gravel +	$5,000	$2,500	$5,000	$2,500	11:1
Central West Maliyan	$4,000	$2,000			
Golden Eagles Pairs Tournament	$5,000	$5,000	$5,000^		
Schools Out for Summer +	$5,000	$3,000			
Wine Festival	$10,000	$10,000	$14,500	$10,000	1:1
Sustainable Living Expo	$4,000	$4,000	$4,000	$4,000	3:1
National Bridge Championship #	$10,000	$10,000			
Orange Chamber Music Festival	$9,713	$9,713	$10,000	$10,000	11:1
Orange Volcanic Mountain Challenge	$5,000	$5,000			
Junior Touch Football Championships	$4,720	$4,720	$4,550	$4,550	2:1
Central West Vets Golf Week	$1,500	$1,500			

Evented	Requested in 2023/24	Approved in 2023/24	Requested in 2024/25	Approved in 2024/25	2024/25 Spend per Visitor Ratio
Glow Roller Discos +	$2,000	$2,000			
FOOD Week	$10,000	$10,000	$10,000^		
Wangarang Charity Golf Day	$5,000	$5,000			
Backroads Brews and Blues +			$5,000	$3,000	3:1
White Tie Ball			$8,000	$8,000	27:1
Orange Golf Club +			$1,000	$1,000	4:1
Australian National Field Days			$10,000	$10,000	1:2
Regional Development Australia			$5,000	$3,000	20:1
Total Expenditure for 2023/24		*$101,433*			
Committed to date for 2024/25				*$82,650*	

* Already approved from previous years
# Unlikely to apply for a similar level of funding this year
^ Included in this round of applications
\+ Private company

Information for Councillor's regarding the data within submissions:
The section titled *Visitation Based on Applicants Data* is to show how many locals, day visitors and overnight visitors are expected to attend the event. This information is derived from the application and can include ranges, depending on what the organisation has included in their application. Councillors should note that staff have not verified how the applicant's figures were arrived at, and Councillors should use their discretion in considering the visitor numbers.

The category titled "*OCC $ per participant ratio (lower ratio = less spend per person)"* is to allow the Councillors to view an average cost per person briefly to assist in determining if the application is value for money. These figures are based on the applicants requested figure, not the recommendations from staff. This information has been included at three levels, total participants (locals, day visitors and overnight visitors), total visitors (day visitors and overnight visitors) and overnight visitors. A ratio of 5:1 indicates $5 of Council funds per visitor in funding. Ratios are rounded to the nearest whole figure in most cases. Again, Councillors should note that staff have not verified how the applicant's figures were calculated, and Councillors should use their discretion in considering the visitor numbers.

The section titled "*Income generated (DNSW)*" is based on the applicants estimated number of participants and their home locations. Staff can apply average spend data from Destination NSW (DNSW) to give an indication of the likely income to be generated for the economy. Based on Destination NSW figures, a day visitor spends $159 per trip and an overnight visitor spends $478 per visit.

Apart from this data there are other considerations that can be included in deliberations surrounding supporting or not supporting the application. These include:

- How long the event has been going and does it have the capacity to grow?
- Does the event have overriding social benefits to the broader community or the more disadvantaged members of our community?

- Is this accessible to a large proportion of the community who may wish to attend or is it for a small select group?
- Will the event provide additional benefits to Orange such as national media exposure?
- Increased promotion of the city and/or identification of the city with a recognised product such as sport, food, wine, agribusiness, clean environment etc.
- Will not funding the event have an adverse impact on the ability of the organisers to hold the event?

Applicant 1	**Zolere Enterprises Pty Ltd – A Night in Nashville**
Policy Category	Flagship Event Funding - Assists the development of events that have been running for 2 years or more and contribute to the Orange360 tourism region and demonstrate that they attract overnight visitation.
Amount requested	$10,000
Category Maximum	$10,000
Aligns to Destination Management Plan	Yes. Aligns to Theme 5 – Events, Festivals and Conferencing.
Social issues addressed	Nil (not part of the guidelines so does not affect eligibility).
Previously funded by Council?	• 2023-24 - $0 • 2022-23 - $5,000 • 2021-22 - $5,000 • 2020-21 - $0 • 2019-20 - $0 • 2018-19 - $0 • 2017-18 - $0
Other reported sponsorship	The organisation will be underwriting the significant proportion of the event and all the risk. They have been unsuccessful for other grants to date.
Summary information	• The event will be held 15 March 2025 • The event is an all-American themed country music festival • The event has had a growing percentage of visitors and organisers expect it to be approximately 66% more this year. • The event supports other businesses in town in the areas of accommodation, food vendors, musicians and more. • The event has the capacity to grow into a significant major event for Orange. In only its fourth year it appears to be significantly surpassing the Parkes Elvis Festival for the same stage in its formative years. It has been reported that the Parkes Elvis Festival nearly folded in years 6 and 7 and would have done so without the support of Parkes Shire Council
Visitation based on applicants' data (per event day)	• Locals – 500 • Day visitors – 0 • Overnight visitors – 1,000

OCC $ per participant ratio (lower ratio = less spend per person)	• Total participants – 7:1 • Total visitors – 10:1 • Overnight visitors only – 10:1
Income generated (DNSW)	• $478,000
Complies With Policy	Yes. The contribution of cash is expected to be $140,000 and in-kind is $40,000 which is greater than the requirement.
RECOMMENDATION	It is recommended that Council consider funding the event for an amount of $5,000 due to restricted funds remaining for the financial year, in line with previous support.

Applicant 2	**Orange Bridge Club – 2025 CWF Gold**
Policy Category	Incubator Event Fund - Provides seed funding to events in their first or second year of activity to assist them in getting their event up and running.
Amount requested	$5,000
Category Maximum	$5,000
Aligns to Destination Management Plan	Yes. Aligns to Theme 5 – Events, Festivals and Conferencing.
Social issues addressed	Nil.
Previously funded by Council?	• 2023-24 - $10,000 (this was for the National Championship) • 2022-23 - $0 • 2021-22 - $0 • 2020-21 - $0 • 2019-20 - $0 • 2018-19 - $0 • 2017-18 - $0
Other reported sponsorship	The organisers are seeking money from Newmont and have received money from the Ex-Services Club. The applicant has listed an in-kind contribution of $63,504.
Summary information	• The event will be held 10 – 13 April 2025 • A qualifying event for Bridge players to move to higher level events • There are only two of these events in NSW (Coffs Harbour is the other one) • The previous funding of $10,000 was for the National Championships, which are only held in NSW every 8 years
Visitation based on applicants' data (per event day)	• Locals – 60 • Day visitors – 40 • Overnight visitors – 300
OCC $ per participant ratio (lower ratio = less spend per person)	• Total participants – 13:1 • Total visitors – 15:1 • Overnight visitors only – 17:1

Income generated (DNSW)	$149,760
Complies With Policy	Yes.
RECOMMENDATION	That the sponsorship is approved for an amount of $5,000.

Applicant 3	**Orange City Bowling Club – Golden Eagle Classic**
Policy Category	Flagship Event Fund - Assists the development of events that have been running for 2 years or more and contribute to the Orange360 tourism region and demonstrate that they attract overnight visitation.
Amount requested	$5,000
Category Maximum	$5,000
Aligns to Destination Management Plan	Marginally. Theme 5 – Events, Festivals and Conferencing refers to all sorts of events except sporting events. It is believed this is an oversight in the final draft of the DMP.
Social issues addressed	Nil.
Previously funded by Council?	• 2023-24 - $5,000 • 2022-23 - $0 • 2021-22 - $0 • 2020-21 - $0 • 2019-20 - $0 • 2018-19 - $0 • 2017-18 - $0
Other reported sponsorship	The organisers are seeking other sponsorship to the total of $16,460.
Summary information	• The event will be held 23 - 27 February 2025 • There will be 42 teams of 2 people playing lawn bowls • There is around $13,350 in-kind support
Visitation based on applicants' data (per event day)	• Locals – 20 • Day visitors – 0 • Overnight visitors – 80
OCC $ per participant ratio (lower ratio = less spend per person)	• Total participants – 50:1 • Total visitors – 63:1 • Overnight visitors only – 63:1
Income generated (DNSW)	$38,240
Complies With Policy	Yes.
RECOMMENDATION	Given the low balance of funds available for the remainder of the financial year (7 months) staff have compared the Council dollars per participant ratio as a measure of equity in assessing applications. A ratio of 15:1 should be the maximum rate. The recommendation is that the sponsorship is approved for an amount of $1,500.

Applicant 4	**Orange FOOD Inc – Orange FOOD Week 2025**
Policy Category	Quick Response Fund was nominated in the subject header of the email. This event does not meet the criteria for Quick Response fund but can be considered under Flagship Event Fund - An event that has been running for more than 2 consecutive years that contributes to the Orange360 tourism region and can demonstrate that it attracts overnight visitation
Amount requested	$10,000
Category Maximum	$10,000
Aligns to Destination Management Plan	Theme 5 – Events, Festivals and Conferencing
Social issues addressed	Nil.
Previously funded by Council?	• 2023-24 - $10,000 • 2022-23 - $10,000 • 2021-22 - $0 • 2020-21 - $5,000 & $2,000 (Sampson Street Long Lunch) • 2019-20 - $0 • 2018-19 - $8,500 & $1,500 • 2017-18 - $1,500
Other reported sponsorship	The organisers are seeking other sponsorship to the total of $47,384 and donations of $6,000.
Summary information	• The event will be held 28 March to 6 April 2025 • Ten events have been listed in the application and the attached sponsorship prospectus lists up to 60 individual events • The application shows an anticipated attendance of 10,000 people for next year (2025) compared to the prospectus that shows attendance last year of 5,317
Visitation based on applicants' data (per event day)	• Locals – 10,000 • Day visitors – 0 • Overnight visitors – 6,000
OCC $ per participant ratio (lower ratio = less spend per person)	• Total participants – 1:1 • Total visitors – 2:1 • Overnight visitors only – 2:1
Income generated (DNSW)	$2,868,000. Councillors should note that this is not the nett gain as the scale of the event impacts other visitors' ability to gain accommodation for that period.
Complies With Policy	Yes, if applied to the Flagship policy.
RECOMMENDATION	Given the low balance of funds available for the financial year the recommendation is to take up an "apple" level sponsorship (Night Markets). The recommendation is that the sponsorship is approved for an amount of $5,500.

ATTACHMENTS

1 A Night in Nashville Cover Application form (redacted), IC24/26819⇩
2 A Night In Nashville Flagship Application, IC24/26795⇩
3 Orange Bridge Club Cover Application (redacted), IC24/27789⇩
4 Orange Bridge Club Incubator Event Fund Application, IC24/27788⇩
5 Orange City Bowling Club Golden Eagle Classic Cover Application (redacted), IC24/27977⇩
6 Orange City Bowling Club Flagship Event Fund 2024, IC24/27976⇩
7 FOOD Week Event Sponsorship Cover Application Form 2025 (redacted), IC24/28157⇩
8 2025 FOOD Week Sponsorship Prospectus, IC24/28152⇩

ORANGE CITY COUNCIL

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EVENT SPONSORSHIP COVER APPLICATION FORM

APPLICANT'S DETAILS

Name of organisation:	Zolere Enterprises PTY LTD
Postal address:	
Contact name:	
Position:	
Phone:	AH:
Mobile:	
Email:	

What is the legal status of your organisation? (eg Incorporated, Association, etc.)
If not-for-profit please attach evidence – such as charter/constitution showing no personal gain will be available to members, charitable status advice or a statutory declaration

Please select:	☑ Profit or ☐ Not-for-Profit
If not-for-profit:	☐ **Constitution, tax ruling or other document confirming not-for-profit status is attached**
Is your group/organisation registered for GST?	☑ Yes ☐ No
If applicable, please provide:	ABN: ACN:

EVENT DETAILS

Name of event:	A Night In Nashville
Location of event:	Agricultural & Williams Pavilions, Orange Showground
Proposed date/s of event:	15th March 2025
If the event is on Council land/ premises, have you booked this space with Council?	☑ Yes ☐ No
How many people will be involved in your event? (Estimate)	Up tp 50 staff, 1500 attendees
How many people will come from outside Orange for the day? (Estimate)	1000
How many people will stay overnight? (Estimate)	1000

Please provide an outline of the event, including a summary of proposed activities and schedule:

Australia's 'A Night In Nashville' Honky Tonk is an All-American themed country music festival currently held in Orange in the heart of Central West NSW. This is a fully themed event decked out with festoon lights, hay bales, neon signs, line dancing, american food vans and a mechanical bull with the perfect setting for festival enthusiasts to come to together and enjoy a fantastic end-to-end American Country Music experience.

The event has successfully been held three times, beginning with the inaugural year in 2021, where 800 tickets were sold to locals over two nights. In 2023, the event saw visitor significant growth, selling 936 tickets, with 47% of attendees coming from outside the local area. By 2024, attendance had increased to 1,140 over two nights, with 56% of participants being visitors. This upward trend reflects the event's strong appeal and resilience, even amidst current financial challenges, and highlights its potential as a growing attraction for the region.

The event supports local business and provides:
- Live music
- Mechanical bull
- Games
- Line dancing
- Local Food stalls
- Local vendor stalls
- Local Wine

See our 2024 video here https://youtu.be/XoVl2fvFdGc for an overview of the 2024 event

EVENT BUDGET

Please outline the proposed income and expenditure budget for the event

Income Source (cash)	**$**
eg: Organisation X	$ 1000.00
Ticket sales, 1400 @$100 (Largely dependant on success of ticket sales)	$ 140,000.00
Bar (Largely dependant on success of ticket sales and weather)	$
Grants (currently unsuccessful with every application)	$ 0
	$
	$
Orange City Council Event Sponsorship request	$ 10,000
Total Income	$ 150,000
Expenditure Items (cash)	**$**
eg: Marketing – 8 x TV adverts	$ 2000.00
Musicians/artists/performers/sound	$ 32,500
Styling/Production/equipment	$ 27,000
Security/Staff/Event Contractors/Licenses etc	$ 16,320
Marketing	$ 10,000
Honky Tonk Saloon 2nd Stage Set up Investment (2nd stage in Willaims Pav.)	$ 10,000
Other expenses - busses, bins, admin costs, misc.	$ 5000
Venue hire, Festoon lighting, Street flag promotion	$ 7500
Total Expenditure	$ 108320
Total Income and Total Expenditure must equal	$ For Profit Event Run by a Local Business

In-kind Contributions (People's time/ value: Based on May 2017 to May 2018 Australian Bureau of Statistics (ABS) figures, volunteers are now worth $41.72 per hour)	**$ Value of In-kind Contributions**
eg: letter drop/ street walk – 1 hour, 1 person	$ 41.72
BNB Made Easy CEO (Time on event / time out of BNB Made Easy)	$ 30,000
in kind donation to kick off kitty - BNB Made Easy	$ 5000
Use of BNB Made Easy internal Marketing and IT Teams (Time out of Business)	$ 5000
	$
	$
	$
Total In-kind Contribution Value	$ 40000

DECLARATION

On behalf of: (name of organisation if applicable) Zolere PTY

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

☑ I understand that should this application be approved by Orange City Council, I may be required to submit any requested Tax Invoices, plans or reports and will be required to enter into an Event Agreement with Council.

☑ I declare that the Organisation will provide all required paperwork, including a Certificate of Currency of Public Liability Insurance (to a minimum of $10 million) with Orange City Council noted as an interested party.

Signed

Date 30/09/2024

Print name

Position in organisation

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

EVENT FUND OCC APPLICATION - $10,000
'A Night in Nashville – March 15, 2025'

1. **How many years has your event operated for and what were the levels of attendance (both local and visitor) at the event(s)?**

A Night in Nashville has been running for three years, born during the COVID-19 pandemic period, to support the struggling music industry, local businesses, and more importantly bring the adults of the community back together. Since its inception, the event has demonstrated remarkable growth in both attendance and audience diversity.

- **2021 (Inaugural Year):**
  We attracted 800 attendees, with 100% being locals and the venue capacity being capped by covid regulations. This event provided much-needed entertainment for Orange residents during a tough period of lockdowns and homeschooling, offering a avenue to reconnect and enjoy a high-quality event in their own town.
- **2023 (Second Year):**
  The event grew with 950 attendees, a 19% increase in participation. More notably, word got out with a whopping 47% of attendees were visitors from outside the region, signalling our successful marketing efforts and appeal beyond the local community. Visitors travelled from as far as Brisbane and Melbourne, spending 3–4 days in Orange to enjoy the festival.
- **2024:**
  In tougher market conditions, the event reached new heights, with attendance reaching 1,140. Again, a notable increase to 56% (644) visitors, demonstrating the event's continued appeal and increasing economic impact on the local community.

Overall, the increasing attendance and the growing percentage of visitors suggest that A Night In Nashville is of appeal and is becoming recognised as a key cultural event in the area, contributing to the local economy and showcasing the unique charm of Nashville to a wider audience.

2. **Please detail how the sponsorship will help the event grow the diversity of sub-events and activities to attract additional visitors to the local economy or increase the length of stay and average spend consistently over time.**

   I have a vision to continue growing A Night in Nashville into a key cultural event in the NSW event calendar. I can see potential in continuing to run in Orange, similar to what the Tamworth Country Music Festival and Parkes Elvis Festival are for their respective towns. Support from Orange City Council will enable us to remain fixated on Orange, continue to expand the event and create a more significant economic impact than past years.

   While I plan to continue with the "A Night in Nashville" theme we have an opportunity to evolve 'Nashville' into a broader 10-day "Tennessee Orange" festival with supplement events contributing to the theme such as a Memphis soul and blues weekend, elevated food experiences, and mid-week themed evenings e.g. Dolly Parton, Ray Charles, Johnny Cash, Elvis, etc. This multi-day format will attract more visitors, a broad demographic, increase the length of stay, and boost local spending.

   Elvis is Aging but Nashville, TN, "the Music City," is timeless and constantly evolving and this festival can also evolve over the years. The Americana theme is vibrant, visually captivating, and full of energy, offering an experience that both locals and visitors can easily embrace and enjoy.

   By Strengthening the foundations of 'A Night In Nashville' we can step forward to creating a long-term draw for tourists and music lovers who will choose to visit, attend, be exposed to. and spend in the region.

3. **How will the event involve and engage local businesses, sporting groups, artists, community groups and or interested individuals? How will it assist in building the reputation of Orange by associating with positive and inclusive activities in the Orange community?**

   A Night In Nashville engages the Orange community by collaborating with local businesses, organisations, and individuals further bolstering the local economy.

   Direct Local Business Engagement: Each event we engage local businesses including Westend Motor Lodge, Arancia Pizza, Bull & Smoke BBQ, Trang Hue, Lux events by Jess, Say yes with Tess, Country Booths, Studio Door Videography, Brenton Cox Photography, Orange PA, JD Events, Knock'n' Boots line dancing, Banksia Building, Kennards Hire, Robbie Mortimer Music, Hustle & Heart, Megan Woods Music, Clancy Pie, Justin Landers, Robin Hood Hotel, Freemasons hotel, BNB Made Easy + more.

Indirect Local Business Benefit: In 2024. our event drew in 644 adult visitors. According to the Orange Destination Management Plan, each of those visitors spend an estimated $547 per visit equalling around $352,000 injection into the local economy.

Local Staff: Our team is comprised of local staff across various roles, including bartenders, first aid, wedding coordinators and local labourers. This staffing strategy not only creates jobs but also allows the community to play a vital role in the event's success, fostering a sense of ownership and pride among residents.

Through these efforts, we aim to build the reputation of Orange as a welcoming community that values local talent and fosters positive, inclusive activities, ultimately enhancing the overall experience for residents and visitors alike.

4. **What strategies will be used to promote the event to both local and out of region audiences and how will the success of these strategies will be measured. If a marketing plan has been developed, please attach it to the application.**

Our marketing approach is focused on creating a high-quality experience that transports attendees to the heart of Nashville the moment they walk through the gates. We spare no expense on theme including neon signs, hay bales, flags, festoon lights, line dancing, paid actors, influencers and other decorations that create a truly immersive experience.

We target both local and out-of-region audiences through strategic digital marketing, partnerships, and collaborations with influencers. Success will be measured through ticket sales, attendance rates, and social media engagement and attendee feedback.

Please see the attached marketing plan for detailed strategies, campaigns and metrics.

5. **How does the event fit into the annual event calendar and is the organising committee mindful of peak tourism periods for the Orange360 region?**

   After testing various dates, A Night in Nashville has found a comfortable fit in early-mid March, which sits in the shoulder season before the Easter and Food Week, school holiday and Balloon Fest period. The weather in March is more favourable for our event between heat, thunderstorm risk and cold weather conditions, and this timing allows us to capitalise on the lead-up to CMC Rocks QLD, positioning our event as a potential stop for authentic American artists in the future.

   Our Event in March event enhances Orange's ability to attract visitors and further boost Orange's visitor economy.

6. **Are you applying for an annual single year grant or 3 years of confirmed funding?**

   I am applying for a single year of funding as we continue to develop and evaluate the success of Nashville. I am hopeful that with sufficient support from Orange City Council, I can secure the long-term growth and positive impact of A Night in Nashville for the Orange community.

   If all goes to plan our 2025 event will attract up to 1000 visitors and 500 locals contributing to over half a million dollars injected into the local economy.

   A Night in Nashville is a high-quality, locally-driven event with the potential to not only become a key fixture in Orange's cultural calendar but also to shine on the national stage as one of Australia's premier cultural events. The benefits will be significant and long-lasting, leaving a positive impact on the region for years to come.

ORANGE CITY COUNCIL

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EVENT SPONSORSHIP COVER APPLICATION FORM

APPLICANT'S DETAILS

Name of organisation: Orange Bridge Club		
Postal address ORANGE NSW 2800		
Contact name:		
Position:		
Phone:	BH:	AH:
Mobile:		
Email:		
What is the legal status of your organisation? (eg Incorporated, Association, etc.) **If not-for-profit please attach evidence – such as charter/constitution showing no personal gain will be available to members, charitable status advice or a statutory declaration**		
Please select:	☐ Profit or x☐ Not-for-Profit	
If not-for-profit:	x☐ **Constitution, tax ruling or other document confirming not-for-profit status is attached**	
Is your group/organisation registered for GST?	☐ Yes x☐ No	
If applicable, please provide:	ABN:	CAN: 000 438 648

EVENT DETAILS

Name of event: 2025 CWF Gold
Location of event: Orange Ex Services Club
Proposed date/s of event: 10-13 April 2025
If the event is on Council land/ premises, have you booked this space with Council? ☐ Yes N/A☐
How many people will be involved in your event? (Estimate) 400
How many people will come from outside Orange for the day (340)
How many people will stay overnight? (300)
Please provide an outline of the event, including a summary of proposed activities and schedule:

The Australian National Championships (ANC) incorporating the Central West Festival of Bridge were successfully held at the Orange Ex Services Club from 6-18 July 2o24 with 696 attendees over a 13 day period. Of these people 60 registrations were from Orange and the remainder from Sydney, Canberra, Interstate and 3 from New Zealand

2025 CWF Gold has emerged from this program as an ongoing event to be held over 4 days at the Orange Ex Services Club. It is a Gold Point event run by Orange Bridge Club under license from the Australian Bridge Federation to ensure it attracts the best players in the country plus their partners to come to Orange to collect Gold Points which are essential to progression to higher levels for bridge players. There are only two such similar events in NSW, Coffs Harbour in August and Sydney in October.

The event is being held in April to fit in with a vacant spot in the National Bridge Calendar. It will consist of a 2 day pairs event on 10-11 April and a 1.5 day teams event on 12-13 April. The aim is to have 80 tables on each of the 4 days which means 320 players. It is anticipated that any of the players would stay for 4 days but the number of 400 is arrived at with some unique registrations in both the pairs and team events. The fact that each event is held over 2 days requires players to stay in Orange and boost the cities economy.

The registration fee includes a $30 buffet lunch on each of the four days to provide value to the Orange Ex Services Club and we will also be holding welcome drinks there. We will be conducting a visitors partners program through the Orange Visitors Centre highlighting local restaurants, wineries and retail outlets.

The age group attending are largely retired senior citizens many with significant disposable income. The feedback from the ANC was outstanding with the Director Matthew McManus saying *it was the best managed and most enjoyable event in recent years*.

We have engaged Orange 360 to assist with the marketing most of which will be done through electronic means. This includes advertising in the Australian Bridge Federation Newsletter and most importantly in the event brochure which is available online through the MyABF app.

Orange City Council were a significant sponsor of the highly successful 2024 ANC and inaugural Central West Festival of Bridge associated with it, The **2025 CWF Gold is a new event** which needs to establish itself in its own right without the added attraction of the ANC to bring interstate players to compete in the teams championship. It is thus essential that we acquire seed funding to establish the event which we feel after the first year will be self sustainable.

EVENT BUDGET

Income Source (cash)	$
eg: Organisation X	$ 1000.00
Please outline the proposed income and expenditure budget for the event Event registration fees	$60,000
Newmont Community Grant (proposed)	$20,000
Orange Ex Services Club	$12,000
Orange City Council Event Sponsorship request	$ 5,000
Total Income	$87,000

Expenditure Items (cash)	$
eg: Marketing – 8 x TV adverts	$ 2000.00
Directors fees, organiser fee	$17,000
Lunches for players included in registration fees	$30,000
Prizes for players	$4,000
Purchase of equipment (one off cost in 2025)	$6,000
Marketing- brochures, banners, travel to events in Gold Coast, Sydney and Canberra	$10,000
Other expenses including dealing, printing, payment to caddies, license fee, lighting and storage	$8,000
Venue hire	$12,000
Total Expenditure	$87,000
Total Income and Total Expenditure must equal	$87,000

In-kind Contributions (People's time/ value: Based on May 2017 to May 2018 Australian Bureau of Statistics (ABS) figures, volunteers are now worth $41.72 per hour)	**$ Value of In-kind Contributions**
eg: letter drop/ street walk – 1 hour, 1 person	$ 41.72
3 organisers from Orange Bridge Club 200 hours each over 8 months @ $41,72/ hour	$25,032
Playing and promoting 2025 CWF Gold in Sydney, Gold Coast and Canberra	$12,000
Members of Orange Bridge Club-travel, accommodation, publicity. Logistics managers 200 hors @ $41.72	$8,344
Hospitality and site management 8 people 10 hours per day 4 days	$13,184
Rotary Club volunteers bump in and bump out 20 x 6 hours	$4,944

Total In-kind Contribution Value	$63,504

DECLARATION

On behalf of: (name of organisation if applicable) Orange Bridge Club

☐ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

☐ I understand that should this application be approved by Orange City Council, I may be required to submit any requested Tax Invoices, plans or reports and will be required to enter into an Event Agreement with Council.

☐ I declare that the Organisation will provide all required paperwork, including a Certificate of Currency of Public Liability Insurance (to a minimum of $10 million) with Orange City Council noted as an interested party.

Signed	Date
Print name	
Position in organisation	

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

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EVENT SPONSORSHIP
Incubator Event Fund Application

EVENT DETAILS

What is the purpose of this event and why do you think it will work in Orange?

The 2025 CWF Gold- a new event, follows the successful holding of the 2024 Australian National Championships and Central West Festival of Bridge held at the Orange Ex Services Club from 6-18 July 2024. The event attracted 696 registrations from across the country, of which only 60 came from Orange. Many were so enthused by the quality of the event in 2024 they expressed their desire to return again in 2025, with some already having booked their accommodation.

2025 Gold is a new event designed to provide opportunities for bridge players across the country to attain gold masterpoints which are essential to players progression to higher levels. There are only two other similar events currently in NSW, in Coffs Harbour in August and Sydney in October. This event provides a great opportunity for players in the Central West and further afield, particularly Sydney and Canberra to come to Orange and enjoy their bridge as well as they and their partners experience the delights of local restaurants, wineries, cultural attractions and retail outlets.

We have adopted the slogan "Play like Legends, Live like Locals" focusing on Orange as a destination which not only has an excellent venue at the Ex Services Club to play bridge but a wide range of attractions for players and their partners to extend their visit beyond the 4 days of the Congress.

2024 proved that this can work despite the many doubters in Capital Cities. The 696 players were involved in excess of 3500 sessions and stayed an average of 5 nights producing significant gains for the Orange Economy.

How will the event attract visitors to the Orange 360 region? Please discuss which demographics you intend to target and how your event services this group

As discussed in he previous section the granting of a licence by the Australian Bridge Federation (ABF) to run this Congress as a National Gold Point event distinguishes it from other events held in Metropolitan and Regional Centres. The reputation gained from the 2024 ANC and Central West Festival of Bridge from the survey responses received indicated overwhelmingly how much the participants enjoyed the event and the hospitality they received at the venue and within the varied attractions they visited during their stay in the city.

The event will largely attract senior citizens who have the time and financial resources to attend. They will be particularly attracted to the wide variety of restaurants and wineries in the immediate area plus the cultural activities particularly places such as art galleries, museums and activities in the Orange Civic Theatre.

We will access this group through visits to other Gold Point Congresses in Canberra, Sydney and the Gold Coast with publicity and promotions. The ABF newsletter is circulated amongst the 33,000 registered players in Australia and provides an excellent marketing point. Most importantly players look to register for National Events through the MyABF app where an online brochure is being used to provide details of the event plus attractions available to visitors to Orange. Entries for the event opened on 1 October 2024.

This event is strongly in support of Objectives 12.1 and 12.2 in the Orange City Council 2023-24 Strategic Plan to see Orange as a tourism destination of choice and to attract a wide variety of events ensuring accessibility for all.

EVENT DETAILS (CONTINUED)

Will your event involve and engage local businesses, sporting groups, artists, community groups or interested individuals? Does the event assist in building the reputation of Orange by associating with positive and inclusive activities in the Orange Community? Please give details of involvement of others.

We will access the resources of Orange 360 to engage with local business to be involved with the program. This year Birdie opened on Sunday and Monday evenings to provide more scope for evening meals for players. We will actively promote them again in 2025.

Inland Digital provided copying services at no cost to the tournament in 2024 and we will be approaching them again together with Print Storm and Print Flow and OfficeWorks who we used for producing banners, tickets and brochures in 2024. Both Swinging Bridge and Philip Shaw Wineries provided excellent prizes sampling local produce in 2024 and Ross Hill Winery put on a masterclass dinner with Michael Manners this year. We will be approaching all these people again for their support in 2025.

Orange 360 approached local transport and accommodation providers for support and pricing this year and we will be asking them again to do this in 2024. The Mercure Hotel have already agreed to be a sponsor and provide a special rate for players in the 2025 event.

The Orange Ex Services Club are critical to the success of this event and they have agreed to provide the venue free of room hire charge again for 2025 with the desire to continue this arrangement at least through the initial 3 years of the license agreement.

Please outline the management structure of your event organisation, including the key roles and responsibilities, and the use of paid or unpaid staff?

Bridge NSW applied to the Australian Bridge Federation (ABF) for a license to run the CWF Gold event for the years 2025-27. This has been granted with Bridge NSW giving the licence to the Central West Bridge Association who have appointed Orange Bridge Club as the organisers of the event.

Three members of Orange Bridge Club Murray Paterson (Vice President), Anne Tonna and Rob Ward (who is based in Sydney) form the executive committee. Rob is an ex member of the ABF committee and is essential having easy access to these officers in Sydney and across the country.

Within the Orange Bridge Club there are designated roles for managing publicity, transport and accommodation, local tourist attractions and activities and logistics in running the event such as dealing the cards. All work conducted by individuals in organising the event is done on a voluntary basis with the Orange Bridge Club being given an organiser fee as the host club. This money will be used to provide some refurbishment to the clubhouse located at 23 Glenroi Avenue, Orange.

The Central West Bridge Association was created to ensure that the Orange Bridge Club was not put at any risk through the conduct of this special event. This risk is carried by Bridge NSW. Any profits from the event will be shared equally by the Central West Bridge Association and Bridge NSW.

How do you intend to measure attendance at the event, the experiences of event attendees and the level of visitation from outside the region. How will you report his back to Council?
(Note: Business Development Staff can provide suggestions on how to achieve this but please do not leave it until the last minute to request input as staff may not necessarily be available in the closing days)

All players register to the event through the MyABF app which gives a complete breakdown of where they come from and the numbrer of days they will be participating in the event during their stay in Orange, We have purposely constructed the Congress as two 2 day events which ensures that players and partners who don't live locally need to stay at least overnight to participate. It is highly likely that most players will register in both the pairs and teams events and thus require at least 4 nights accommodation in Orange. A number have already booked as a result of the success of the 2024 ANC.

At the conclusion of the event each participant will be sent an online survey to complete. We had a high return rate in 2024 which provided us with the impetus to develop a new event 2025 CWF Gold for next year. The detailed information is available to Council from this year and provides outstanding feedback on how the participants regarded Orange as a tourist destination, even at a time of year where there are fewer visitors than normal.

We thank Council for their support in 2024 and look forward to establishing this new event to provide enjoyment to senior citizens and others who will be looking forward to returning to Orange for the 2025 CWF Gold.

ORANGE CITY COUNCIL

A: 135 Byng Street, Orange
T: 6393 8000
E: council@orange.nsw.gov.au
W: www.orange.nsw.gov.au

EVENT SPONSORSHIP COVER APPLICATION FORM

APPLICANT'S DETAILS

Name of organisation: Orange City Bowling Club LTD

Postal address:

Contact name:

Position:

Phone: AH:

Mobile:

Email:

What is the legal status of your organisation? (eg Incorporated, Association, etc.)
If not-for-profit please attach evidence – such as charter/constitution showing no personal gain will be available to members, charitable status advice or a statutory declaration

Limited

Please select: ☐ Profit or ☑ Not-for-Profit

If not-for-profit: ☑ **Constitution, tax ruling or other document confirming not-for-profit status is attached**

Is your group/organisation registered for GST? ☑ Yes ☐ No

If applicable, please provide: ABN: 31000081676 ACN: 00081676

EVENT DETAILS

Name of event:	The Golden Eagle Classic
Location of event:	Orange City Bowling Club
Proposed date/s of event:	23-27 February 2025
If the event is on Council land/ premises, have you booked this space with Council?	☐ Yes ☑ No
How many people will be involved in your event? (Estimate)	100
How many people will come from outside Orange for the day? (Estimate)	80
How many people will stay overnight? (Estimate)	80

Please provide an outline of the event, including a summary of proposed activities and schedule:

Lawn bowling tornamnet. 42 teams comprising of 7 sections of 6 teams playing 5 sectional rounds. Held over 4 days.

EVENT BUDGET

Please outline the proposed income and expenditure budget for the event

Income Source (cash)	**$**
eg: Organisation X	$ 1000.00
Player Entry Fee	$ 12600
Sponsorship	$ 16460
	$
	$
	$
Orange City Council Event Sponsorship request	$ 5000
Total Income	$ 34060

Expenditure Items (cash)	**$**
eg: Marketing – 8 x TV adverts	$ 2000.00
Catering	$ $7760
Printing	$ 150
Supplies	$ 150
Entertainmnet	$ 500
Local Advertising	$ 4500
Golden Eagle Prize Money and Badges	$ 21000
	$
Total Expenditure	$ 34060
Total Income and Total Expenditure must equal	$

In-kind Contributions (People's time/ value: Based on May 2017 to May 2018 Australian Bureau of Statistics (ABS) figures, volunteers are now worth $41.72 per hour)	**$ Value of In-kind Contributions**
eg: letter drop/ street walk – 1 hour, 1 person	$ 41.72
Event Contollers 4x8h/day x5 (160h)	$ 6675.72
Event assistants 4x4h/day x4 (64h)	$ 2670.08
BBQ cooks 2x2h/day x4 (16h)	$ 667.52
Umpires 3x8hrs/day x3, 2x4h (80h)	$ 3337.60
	$
	$
Total In-kind Contribution Value	$ 13350.92

DECLARATION

On behalf of: (name of organisation if applicable)

Orange City Bowling Club LTD

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

☑ I understand that should this application be approved by Orange City Council, I may be required to submit any requested Tax Invoices, plans or reports and will be required to enter into an Event Agreement with Council.

☑ I declare that the Organisation will provide all required paperwork, including a Certificate of Currency of Public Liability Insurance (to a minimum of $10 million) with Orange City Council noted as an interested party.

Signed

Print nam

Position ir

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

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EVENT SPONSORSHIP
Flagship Event Fund Application

EVENT DETAILS

How many years has your event operated for and what were the levels of attendance (both local and visitor) at the event(s)?

The first Golden Eagle Pairs Tournament was played in 1969 as an invitation group of 128 pairs competing on the greens across four bowling clubs in Orange NSW.
The competition became known as The Golden Eagle after Fred Bennett saw an eagle on the alter of the Kelso Church and thought that a golden eagle would make an appropriate trophy for the competition. Over the years saw the departure or Orange Ex services Club and Newstead Bowling Club so the organising committee were forced to rethink the size of the event. The 2025 event will host 42 teams (84 players) of which in 2024 there were 46 bowling clubs represented, Noosa QLD being the farthest north and Wynyard Tasmania the farthest South.
Along side 10 local bowlers were players of international standard with two Aussie Superstars with a combined record of 12 NSW Titles, 159 Australian games and 7 Australian Titles representing Australia at the Commonweath Games in 2022.

Please detail how the sponsorship will help the event grow the diversity of sub-events and activities to attract additional visitors to the local economy or increase the length of stay and average spend consistently over time.

Sponsorship of this prestigious event ensures the attractions of the States, Australian and Regional Representative players.
Of the players in the 2024 event 74 were visitors (some with partners) to our City of Orange utilising 74 beds per night over a period of 4 nights. Restaurants, taxies and hospitality venues being well supported throughout the event.

EVENT DETAILS (CONTINUED)

How will the event involve and engage local businesses, sporting groups, artists, community groups and or interested individuals? How will it assist in building the reputation of Orange by associating with positive and inclusive activities in the Orange community?

Local accommodation services will be distributed to potential participants along with the many restaurants available to our visitors during their 4.5 day stay in Orange.

Many past event participants return to Orange to visit the many wineries on offer and enjoy the many cultural activities available.

What strategies will be used to promote the event to both local and out of region audiences and how will the success of these strategies will be measured. If a marketing plan has been developed, please attach it to the application.

A marketing strategy is being implemented with local media outlets such was MMM, Orange City Life and the Central Western Daily. Promotion of the event will also be distributed throughout the Bowls NSW network and a direct marketing campaign for past participants.
The 2024 social media campaign was also a huge success with a reach of over 29000 and page visits of 15800.

How does the event fit into the annual event calendar and is the organising committee mindful of peak tourism periods for the Orange360 region?

At this point in time there seems to be no conflicting shows/events on the proposed dates of 23-27th of February.

Are you applying for an annual single year grant or 3 years of confirmed funding? ☑ Single year grant ☐ 3 year grant

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W: www.orange.nsw.gov.au

EVENT SPONSORSHIP COVER APPLICATION FORM

APPLICANT'S DETAILS

Name of organisation:	FOOD Week Inc.	
Postal address:		
Contact name:		
Position:		
Phone:		AH:
Mobile:		
Email:		

What is the legal status of your organisation? (eg Incorporated, Association, etc.)
If not-for-profit please attach evidence – such as charter/constitution showing no personal gain will be available to members, charitable status advice or a statutory declaration

Incorporated

Please select:	☐ Profit or ☑ Not-for-Profit
If not-for-profit:	☑ **Constitution, tax ruling or other document confirming not-for-profit status is attached**
Is your group/organisation registered for GST?	☑ Yes ☐ No
If applicable, please provide:	ABN: 25 069 215 997 ACN:

EVENT DETAILS

Name of event:	Orange FOOD Week
Location of event:	Orange Region
Proposed date/s of event:	28th March 2025 - 6th April 2025
If the event is on Council land/ premises, have you booked this space with Council?	☑ Yes ☐ No
How many people will be involved in your event? (Estimate)	10,000
How many people will come from outside Orange for the day? (Estimate)	6,000
How many people will stay overnight? (Estimate)	6,000

Please provide an outline of the event, including a summary of proposed activities and schedule:

The signature event calendar for 2025 that will be hosted by FOOD Week are:
28th March - Night Markets in Robertson Park
29th March - Sampson Street Long Lunch (Sampson Street, between Byng and Summer Street).
30th March - FOOD HQ and Shining the Light on Producers Workshops (Orange Visitors Information Centre) and C.W.A. Hall, Robertson Park.
Join our local producers in this special line-up show and tell and taste workshops throughout the week of the Festival.
Sunday 30th March Miso & Mushroom Foraging.
Monday 31st March Gourmet Preserves & Pork
Tuesday 1st April Apple Plums & Cheese
Thursday 3rd April Saffron & Taste Spain
Friday 4th April Fresh Figs & Sophie Hansen + Book Signing
5th April – Forage
Stroll through Orange's picturesque vineyards and enjoy a curated eight-course degustation menu featuring local seasonal produce and the Region's award-winning wines. Meet chefs, winemakers, vignerons, and producers and discover the spoils of the cool climate region.
6th April - Sunday Brunch Producers Markets in Cook Park
In 2025, FOOD Week will continue its success in championing the provenance of the Region's produce, celebrating our local food heroes, and positioning the Region as one of Australia's most aspirational culinary tourism destinations.

EVENT BUDGET

Please outline the proposed income and expenditure budget for the event

Income Source (cash)	**$**
eg: Organisation X	$ 1000.00
Ticket sales - all events	$ 383,231.86
Membership	$ 22,061.83
Sponsorship	$ 47,384
Other including interest	$ 5,228.15
Merchandise Sales	$ 3,088.92
Orange City Council Event Sponsorship request	$ 10,000
Total Income	$ 470,994.76
Expenditure Items (cash)	**$**
eg: Marketing - 8 x TV adverts	$ 2000.00
Event Expenses	$ 334,808.41
Donations	$ 6,000
Insurance	$ 4,534.24
Marketing & Event Management	$ 81,492.89
Website Maintenance	$ 4532.36
Other (including balance $10,137.02 b/f for 2025)	$ 39,626.86
	$
Total Expenditure	$ 470,994.76
Total Income and Total Expenditure must equal	$ 000000

In-kind Contributions (People's time/ value: Based on May 2017 to May 2018 Australian Bureau of Statistics (ABS) figures, volunteers are now worth $41.72 per hour)	**$ Value of In-kind Contributions**
eg: letter drop/ street walk - 1 hour, 1 person	$ 41.72
Quest	$ 13,000
Central Western Daily	$ 2,000
Rex	$ 10,000
	$
	$
	$
Total In-kind Contribution Value	$ 25,000

DECLARATION

On behalf of: (name of organisation if applicable)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

☑ I understand that should this application be approved by Orange City Council, I may be required to submit any requested Tax Invoices, plans or reports and will be required to enter into an Event Agreement with Council.

☑ I declare that the Organisation will provide all required paperwork, including a Certificate of Currency of Public Liability Insurance (to a minimum of $10 million) with Orange City Council noted as an interested party.

Signed

Date 08/11/2024

Print name

Position in organisation

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.


FOOD
FOOD OF ORANGE DISTRICT
April 2025
2025 Sponsorship Prospectus
www.orangefoodweek .com.au

About FOOD Week

Community events uniquely bring local communities together, giving people a sense of ownership and pride in their local areas and an opportunity to celebrate and embrace local diversity, as well as the fresh provenance of the region.

FOOD Week's festival program features a range of events that target various demographic, cultural, and interest groups, attracting visitors to Orange, Blayney, Millthorpe, Molong, and the surrounding areas. The festival incorporates a comprehensive promotional program covering traditional, online and social media.

We are pleased to invite you to invest in our local area and participate in a valuable opportunity to enhance life within our community whilst promoting positive brand awareness for your organisation.





More about FOOD Week

In 2025 FOOD Week Inc. will host the following signature events:

- Friday Night Market
- Sampson Street Long Lunch
- Shining the Light on Local Producers
- Forage
- FOOD Train
- Sunday Producers Market

Under the marketing umbrella of FOOD Week, up to 60 individual events run by producers, wineries, restauranteurs, caterers, tourism operators or community interest groups are included in the FOOD Week program.

This year FOOD Week Inc. will again engage the services of a professional Event Producer through Orange360 to ensure we serve up a ‘world-class’ festival.



Sustainable Events

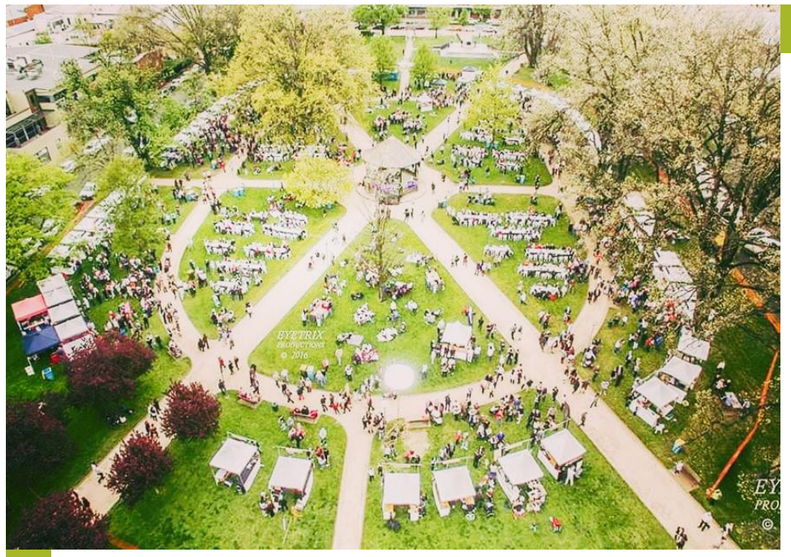
Orange FOOD Week 2025 is committed to producing sustainable event management across all areas of event planning and staging.

The Environmental Impact areas of measure for Orange FOOD Week are:

- Energy*
- Waste* & Recycling
- Transport*
- Suppliers & Materials
- Water
- Attitudes & Legacy
- GHG Emissions

*these areas contribute directly to GHG emission calculations

FOOD Week Inc are on track to achieve its' 2027 target of reducing both TOTAL CO2e emissions and CO2e emissions per visitor by 5% versus our baseline from 2022.







Festival Events

Night Market

FOOD Week's opening event, the Night Markets, features nearly 50 stalls showcasing cuisine from top chefs and local food providers in the Orange region, along with wines, ciders, spirits, and beers from local producers.

Sampson Street Lunch

The Sampson Street Lunch is a unique food and wine celebration inspired by an English summer long lunch, featuring renowned and emerging chefs, wine producers, and entertainers in Orange.

Set under vibrant Autumn Plane trees, the event offers a multi-course meal with paired wines, canapes, and drinks. Collaborating with Orange City Council and, local residents, it has become a highlight of FOOD Week.

Guests are encouraged to dress up for a relaxed afternoon filled with contemporary cuisine and enjoyment.

Shine the light on the Producers

Join our local producers in this exceptional lineup of produce, cooks and chefs.

Show, tell, and taste workshops throughout the festival week. You will meet local producers, learn about their produce, and enjoy tastings with a glass of cool climate wine.







Festival Events

FOOD Train

This weekend package is your premium FOOD Week experience. Hosted by local foodies and regional hospitality faves, you will join a 3-day guided trip from Sydney to Orange enjoying some of the region's best food and wine experiences.

The 2025 FOOD Train will showcase the international influences of Orange's food and wine in a feast of flavour and fun.

Departing Sydney's Central Station on Friday, the FOOD Train weekend includes tickets to the renowned FOOD Week's most sought-after event, Forage, plus local tours, selected FOOD Week events and dining at some of the region's favourite restaurants

Forage

Stroll through Orange's picturesque vineyards, enjoying a curated eight-course degustation menu featuring local seasonal produce and the region's award-winning wines. Meet chefs, winemakers, vignerons, and producers and discover the spoils of the cool climate region.

Forage gives you and your friends a unique opportunity to get amongst some of the well-known Orange Vineyards, take in the views to Mount Canobolas and its surroundings, and enjoy being part of a food event with a difference.

Amble through about 4kms of productive farmland at an altitude that sets the Orange region apart – the cool climate food and wines will be incorporated into a unique degustation menu to enjoy along the way. It will be a feast of flavour and fun in the beautiful outdoors.

Sunday Brunch & Producer Market

Join our local producers in this exceptional lineup of produce, cooks and chefs.

Show, tell, and taste workshops throughout the festival week. You will meet local producers, learn about their produce, and enjoy tastings with a glass of Rosé.

The FOOD Week Grand Finale celebrates at the Sunday Producers' Brunch in Cook Park.



Why Partner with FOOD Week

The FOOD Week Festival is a long-running annual event with a proven history of community engagement. When investing in a FOOD Week event, you invest in the local community and align yourself with a well-known and respected brand.

FOOD Week offers a diverse event program with integrated marketing opportunities across a variety of platforms, providing some of the most powerful marketing media there is:-

- On-the-ground marketing – the opportunity for personal one-on-one time with local producers, consumers, and emerging markets.
- Emotional Relevance – reaching a local targeted audience through food-focused events
- Integrating marketing goals – event sponsorship can be used to launch products, gain new customers, anchor promotions, build databases and more.
- Unparalleled flexibility – the power of your sponsorship is only limited by your input, with opportunities to be included in various advertising mediums, including on-the-ground marketing, print, digital and social.
- Brand Recognition – Enhance your corporate image through partnerships with community events and generate goodwill through community association.

FESTIVAL STATISTICS AT A GLANCE

	2024	2023	2022	2021
Total Attendees	5,317	8,754	11,500	6,300
Total Income	$466,060	$404,544	$340,595	$292,608
Marketing Budget	$31,625	$35,000	$38,500	$34,000



2024 Media Reach

Social Media

- Total Reach: 23,928
- Post Engagement 8,949
- Link Click 1,065

Media Coverage

Over 130 media articles published (up from 50 in 2022 across national publications)

Paid Media

Country Style, Galah and Gourmet Traveler

Famils

Australian Traveler and Country Style
- Media Reach: 2,351,283
- Media Value: $303,000
- Editorial Value: $909,000

FOOD Week Social Media Followers
Facebook – 4,600
Instagram – 5,577



FOOD Week Website

The dedicated website for FOOD Week is the hub of all news, information and ticket sales for the festival and an ideal platform to showcase your support. Our fresh new website is launching in December 2024 with improvements to its navigation and imagery. Each year the website receives close to 30,000 Unique Users exploring over 100k Pageviews. Analytics show the highest site traffic is from January through to the May as potential event attendees seek booking opportunities and information.

Digital Database information
FOOD Week has an active database of around 8,500 members of which 4,200 are actively engaged with FOOD Week Campaigns.

The digital program will be published on www.orangefoodweek.com.au and all event listings will be listed on the Australian Tourism Database Warehouse to increase exposure.

Sponsors will have the opportunity to advertise within the digital program, as well as take advantage of digital advertising on the FOOD Week website.



2025 Marketing

FOOD Week undertakes a variety of marketing and promotion activities as well as engaging Orange360, who are responsible for local and regional tourism marketing and facilitate a national PR agency to assist in the promotion of the festival.

In the lead up to Orange FOOD Week 2025, as well as after the event, Orange360 secured editorial, partnerships and advertising in media publications Delicious Magazine, Mind Food, Marie Claire, The Australian, Gourmet Traveller, The Age, Sydney Morning Herald, Country Style, Australian Traveller and more, providing the festival, as well as the Orange region, with fantastic promotional coverage. In the past SBS Food was secured as a media partner. In addition, we are looking to host a live ABC broadcast with well know presenter Simon Marnie

Below are some of the key activities associated with the festival each year:

- Print and Digital advertising: regional, national and potentially international
- Local Radio
- Social Media: organic and paid
- Outdoor Signage and Posters



FOOD Week 2024 Insights

N=242
(N=74 in 2023)

Source Markets

- 40% of attendees live in Orange or the surrounding region (enpar with 2023)

- 50% of those ‘locals” had friends staying with them during the festival, (up from 26% in 2023)
Visitors 33%

- 31% of visitors came from ‘Sydney’, which is maintained from 2023

- 37% of visitors stayed in hotel accommodation, down from 55% in 2023

- 35% of visitors stayed in Airbnb / Self-contained accommodation, up from 18% in 2023

- 63% of visitors stayed 2 or 3 nights, 18% stayed for 5 or more nights which is up from 10% in 2023





FOOD Week 2024 Insights

Audience stats

More than 70% were female (maintained from 2023)
Nearly a quarter of attendees were aged 61-70,
21% between the ages of 41-50 and 19% between the ages of 51-60.
63% of attendees were over 40 years of age

Advertising/Marketing

Almost 50% of visitors were previous attendees,
28% being invited by family/friends,
18% through social media (***down from 43% in 2023***).

Event Satisfaction

93% of visitors said they would attend the festival in future,
4.3 overall star rating

Event Sponsorship Packages

Benefits		Food Week Festival Major Sponsor Saffron $50,000 x 1	Forage Cherry $20,000 x 1	Sampson Street Honey $10,000x 1	Night Markets or FOOD Train or Producers Workshops (5) Apple $5,500 x 3	Sunday Producer Market Apricots $1,000 x 10
Advertising	Program Web Page Advertising	Yes	Yes	Yes	Yes	Yes
	Program Partner Page	Yes	Yes	Yes	Yes	Yes
	Radio	Yes Interview	Thank you mention	Thank you Mention	Thank you mention	Thank you mention
Publicity/PR	Print Media Press Release	Whole Event	Event Only	Event Only	Event Only	Event Only
	Logo (prime position)	Yes	Event Only	Event On	Event Only	Event Only
	Website – logo listing with URL backlinks	Yes	2024 2025 FY	2024 2025 FY	2024-2025 FY	2024-2025 FY
	FOOD News – Footer Logo	Yes 2024-2025 FY	Yes 2024-2025 FY	Yes 2024 -2025	Yes 2024-2025 FY	Yes 2024-2025 FY
Social Media	Facebook Instagram	Whole Event	6 mentions	3 Mentions	2 mentions	1 mention
Hospitality	Tickets to Night Markets	20	10	10	6	2
	Tickets to Sampson Street Lunch	6	6	8	2	No
	Tickets to the Producer Series Event	10 (2 per day)	10 (2 per day)	10 (2 per day)	5 (1 per day)	No
	Tickets to Forage	12	20	4	2	No
Exhibition Site	Exhibition site 3mx3m site at key events	Selected Events	Yes	Yes	No	No
Signage	Signage at gate entrances	Yes	Event Only	Event Only	Event Only	Event Only
	Banners (if provided)	All Events	4	4	1	No
Other	Speaking Opportunity	Yes	Yes	Yes	No	No
	Presenting rights	Yes	Yes	Yes	No	No
	Opportunity to distribute pre- approved sample items	Yes	Yes	Yes	Yes	No



Community & In-Kind Packages

There are many ways organisations can contribute to FOOD Week events. FOOD Week is always on the lookout for partnerships with organisations offering in-kind services, such as:

- Print material both for on the day and marketing leading up to the event
- Media suppliers providing advertising opportunities and media coverage
- Equipment suppliers, including stalls, furniture and staging
- Accommodation
- Travel vouchers
- Competition prizes

Recognition for In-kind Sponsorship

Depending on the level and quantity of products or services provided, FOOD Week will provide in-kind sponsors with:

- Logo and acknowledgement on the FOOD Week website
- Logo inclusion on event marketing materials
- Logo present in printed event program posters around the site (amount proportional to investment)
- Acknowledgement on selected event signage (amount proportional to investment)
- Verbal acknowledgement by MC



Next steps

FOOD Week Inc. is committed to working collaboratively with our stakeholders and sponsors to ensure that the event's overall success meets individual business expectations and marketing objectives.

The committee welcomes the opportunity to discuss any additional elements that would further encourage your sponsorship participation.

The Event Sponsorship Packages can be tailored to suit your requirements. Individual event sponsorship is not necessarily exclusive and can be shared up to the stated event Sponsorship value.

For a three-year sponsorship commitment, we also offer a 10% discount on the stated annual sponsorship amounts.

APPLICATION FOR FOOD WEEK Sponsorships 2025

If you would like to accept our invitation to Sponsor an Event at Orange FOOD Week, please complete the application and return this page via email. Applications close 6th December 2024

Jeanine Hind, Sponsorship Coordinator, FOOD Week Committee
Mobile: 0467 660 029
Email: secretary@orangefoodweek.com.au

Note: FOOD Week will provide a Tax Invoice for the Sponsorship Type

Company Name:

Contact Name:

Job Title:

Address:

Mobile: Phone:

Email:

Website:

Please select your sponsorship type:

FOOD Week Sponsorship Packages

☐ SAFFRON - Overall Sponsor $50,000

☐ CHERRY - Forage $20,000

☐ HONEY - Sampson Street Long Lunch $10,000

☐ APPLE – Night Markets or FOOD Train or Producers Workshops $5,500 (3 sponsors required)

☐ APRICOTS – Sunday Producer Markets $1,000 (10 sponsors required)

Note: If the above packages are not the right fit or you wish to partner with another company, please contact us to discuss.

FOOD Week Banking Details

Account: FOOD Week

BSB: 082 774

Account Number: 391024914

Company Representative

Signature: Date:

FOOD OF ORANGE DISTRICT

Event Sponsorship Proposal

Elevate your plate!

More Information

If you are interested in investing in your local community as well as reaching your customers on a personal level, please contact us to arrange a meeting.

We look forward to working with you.

JEANINE HIND
Sponsorship Coordinator
FOOD Week Inc
secretary@orangefoodweek.com.au
M: 0467 660 029

FACEBOOK:
Orange FOOD Week
INSTAGRAM:
orangefoodweek

5.14 SOCIAL IMPACT FUNDING GRANT - REQUESTS FOR DONATIONS

RECORD NUMBER: 2024/1685
AUTHOR: Jen Sharp, Director Corporate & Commercial Services

EXECUTIVE SUMMARY

This report provides information to Council to allow for the consideration of a resolution regarding applications for funding through the Social Impact Funding Grant program received between September 2024 and October 2024.

The Social Impact Funding Grant program is available under a one-off 'social impact' grant program, to provide assistance to community and not-for-profit groups that addresses social impact in the Orange Local Government Area (LGA). (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

Council received 15 applications, of which 6 were identified as not meeting the criteria of being local or directly addressing a social impact area.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "16.2. Support community organisations and groups to deliver services and programs".

FINANCIAL IMPLICATIONS

The budget for the Social Impact Funding Grant program for 2024/2025 is **$84,000.** The recommendation is for the full allocation to be awarded is as detailed below.

Annual budget 24/25		**$84,000.00**
Organisation	Requested Amount	Recommended Awarded Amount
Salvation Army	10,000	10,000
FoodCare Orange Incorporated	5,000	5,000
Domestic Abuse Prevention Orange (DAPO)	10,000	10,000
Housing Plus	10,000	10,000
Impact Church Orange	10,000	10,000
Colour City Rainbow Hub	15,500	15,500
Western PTSD Support	35,000	11,750
ODEEP	58,000	11,750
Level Up Youth Services Pty Ltd	50,000	-
Total		**$84,000**
Remaining Balance		*Nil*

POLICY AND GOVERNANCE IMPLICATIONS

Refer to Council's Donations and Grants Policy - ST32

This policy is in accordance with these sections in the Local Government Act 1993:

1. Section 356 (financial assistance)
2. Section 377 (delegated authority)
3. Section 610E (waive or reduce fees)

And in accordance with this section in the Local Government Regulation 2021:

Section 207 (record of donations for auditing purposes)

RECOMMENDATION

1 **That this item be heard and voted on *in seriatim*.**

2 **That Council determines the following applications to the Social Impact Grant Program:**
   1. **To donate $10,000 to The Salvation Army Orange**
   2. **To donate $5,000 to FoodCare Orange Incorporated**
   3. **To donate $10,000 to Domestic Abuse Prevention Orange**
   4. **To donate $10,000 to Housing Plus**
   5. **To donate $10,000 to Impact Church Orange**
   6. **To donate $15,500 to Colour City Rainbow Hub**
   7. **To donate $11,750 to Western PTSD Support**
   8. **To donate $11,750 to Orange and District Early Education Program Incorporated.**

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

Applicant 1	**The Salvation Army Orange**
Assistance Would Support	The assistance would contribute to purchasing supplies to make readymade meals for community members experiencing homelessness and staying in temporary accommodation.
Amount Requested	$10,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	National Organisation, Orange Branch supports Orange residents
Social Impact Area	Food Supply

Applicant 2	**FoodCare Orange Incorporated**
Assistance Would Support	The assistance would contribute to purchasing supplies to meet the specialised needs of people who are homeless, are in temporary accommodation or in low income situations.
Amount Requested	$5,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	Local Organisation operating in Orange
Social Impact Area	Food Supply
Applicant 3	**Domestic Abuse Prevention Orange (DAPO)**
Assistance Would	The assistance would contribute to the costs of a Professional

Support	Development & Community Education Series in 2025. The funding would cover the costs of the venue hire, catering, speaker fees and promotion for the Professional Development & Community Education Series. There will be 3 targeted professional development events (one each for health, education and legal practice).
Amount Requested	$10,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	Local Organisation operating in Orange
Social Impact Area	Domestic and Family Abuse

Applicant 4	**Housing Plus**
Assistance Would Support	The assistance would deliver a social 'Connections Program' providing access to free, peer-based local activities and groups for Housing Plus social housing tenants in Orange, particularly this aged 55+, who may be experiencing (or at risk of) isolation and require additional support to actively participate in the community.
Amount Requested	$10,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	Orange based organisation operating in Orange
Social Impact Area	Mental Health and Wellbeing

Applicant 5	**Impact Church Orange**
Assistance Would Support	The assistance would contribute to upgrading of the hall used for a youth program.
Amount Requested	$10,000
Policy Category	Social Impact
Location of Operation/Impact Area	Orange based organisation operating in Orange
Social Impact Area	Youth Mental Health and Wellbeing

Applicant 6	**The Colour City Rainbow Hub**
Assistance Would Support	The assistance would contribute to branded gazebo information tent, quiet space for events, portable LGBTQIA+ library
Amount Requested	$15,500
Policy Category	Social Impact Grant
Location of Operation/Impact	Orange based organisation operating in Orange

Area	
Social Impact Area	LGBTQIA+ Support

Applicant 7	**Western PTSD Support**
Assistance Would Support	The assistance would contribute to establishment of the organisation with the view to becoming self-funded.
Amount Requested	$35,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	Orange based organisation operating in Orange
Social Impact Area	PTSD Support and Treatment
Staff Recommendation	Given the large amount of this request, it is recommended that a portion of the requested amount be awarded.

Applicant 8	**Orange and District Early Education Program Inc (ODEEP)**
Assistance Would Support	The assistance would contribute to individual and family based model of support for parents and children with a disability.
Amount Requested	$58,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	Orange based organisation operating in Orange
Social Impact Area	Mental Health and Wellbeing for families with Disabilities
Staff Recommendation	Given the large amount of this request, it is recommended that a portion of the requested amount be awarded.

Applicant 9	**Level up youth services PTY LTD**
Assistance Would Support	The assistance would contribute to establish as safe space for youth
Amount Requested	$50,000
Policy Category	Social Impact Grant
Location of Operation/Impact Area	Organisation operates around NSW, small operation in Orange, looking to expand
Social Impact Area	Youth Mental Health and Wellbeing
Staff Recommendation	Given the location of this organisation is broader than Orange and the purpose of the grant being to establishment of the services in Orange, including a safe place for youth to attend, it is recommended that Council do not award any grant funding from this program to this service. The amount of the request could not be made without withholding funds from other organisations and given that the grant is to be used to establish a safe place as a smaller amount granted would not be enough to achieve the goal of the request. It is noted that this service has already utilised Council's Youth Hub facility on occasions.

ATTACHMENTS

1 Application Form - Social Impact Funding Grant - Making Meals that Make a Difference program - The Salvation Army Orange (redacted), D24/125197⇩
2 Application Form - Social Impact Funding Grant - Foodcare Orange Incorporated - Alexandra Ruse (redacted), D24/125199⇩
3 Application Form - Social Impact Funding Grant - Domestic Abuse Prevention Orange (redacted), D24/125201⇩
4 Application Form - Social Impact Funding Grant - Services Programs and Accommodation Services - Housing Plus (redacted), D24/125202⇩
5 Application Form - Social Impact Funding Grant - Impact Church - Impact Youth Group (redacted), D24/125211⇩
6 Application Form - Social Impact Funding Grant - Branded Gazebo and Portable Library - The Colour City Rainbow Hub (redacted), D24/125218⇩
7 Application Form - Social Impact Funding Grant - Western PTSD Support - Lifeline Central West Incorporated (redacted), D24/125206⇩
8 Application Form - Social Impact Funding Grant - Orange and District Early Education Program Inc (ODEEP) (redacted), D24/125213⇩
9 Application Form - Social Impact Funding Grant - Level Up Youth Serviced Pty Ltd (redacted), D24/125431⇩

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation: The Salvation Army Orange

Contact name: Major Colin Young

Position: Officer in Charge

Postal address

Phone: Mobile:

Email:

ABN (if applicable): 57507607457

ACN (if applicable): NA

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

THE SALVATION ARMY is a Christian organisation that seeks to put it faith into action and offer practical support and services to all in need regardless of ethnicity, religion or gender orientation. We seek to meet both the physical and spiritual needs of all those we come into contact with in our community.

YOUR REQUEST

Amount requested: $ 10,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

PROVISION OF READY MADE MEALS usually relies on community donations or in kind donations from supermarkets or other suppliers.

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

WORKING WITH SCHOOLS AND OTHER GROUPS meals are made to be supplied to those experiencing homelessness or in danger of experiencing homelessness or other financial need. Most often these meals are supplied to those in government supplied temporary accommodation with access to a microwave oven. No formal assessment process is required and community member can request this assistance on a regular basis. If the community member has no access to a microwave oven the meal can be prepared on our premises.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

THIS GRANT WILL BE USED TO PURCHASE SUPPLIES TO MAKE THE READY MADE MEALS. Community members experiencing homelessness and staying in temporary accommodation have found these meals are convenient and as there is no cost to the community member they are cost effective.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Nar.

Bank:

DECLARATION

On behalf of: (name of organisation if applicable) THE SALVATION ARMY ORANGE

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 15/10/2024

Print name COLIN YOUNG

Position in organisation OFFICER IN CHARGE

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	FoodCare Orange Incorporated
Contact name:	Ms Alex Ruse
Position:	Secretary/Public Officer
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
63894564503	

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

FoodCare provides cheap and free food and groceries to people who are experiencing financial hardship and are food insecure. FoodCare is run by around 90 volunteers who are rostered to work in the FoodCare shop, drive the free customer transport or collect food from supermarkets. In the past 6 months we have also employed a 20 HPW part-time paid coordinator. Foodcare receives no government funding and relies heavily on financial donations and the generosity of the local community.
Numbers of people accessing FoodCare have grown from around 5,700 in 2020/21 to 9,400 on 2023/2024. This is likely due to the increase in cost of living pressures. FoodCare also 'rescues' food from all of the major supermarkets and some other local businesses to give away to customers. In the past 12 months we have rescued 50,400 kg of food suitable for human consumption. FoodCare vouchers ($10 or $20) are purchased by local service providers and charities to give to their clients who are struggling. FoodCare value adds to every voucher holder by providing free meat, milk, eggs, bread and fresh fruit and vegetables. Every customer gets free fruit and vegetables (to assist people to access nutritious healthy foods). The cost of this value adding was around $47,500 over the past 12 months.

YOUR REQUEST

Amount requested: $ 5,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

From time to time FoodCare applies for and has received grants from ClubsNSW (less than $5,000). Over the past 12 months, financial donations have been received from individual community members, corporate donations and one local organisation. In addition fundraising activities such as having a stall at the FOODWeek night market and entry fee from the Rotary Daybreak Farmer's markets (twice). Lastly, through the sale of food purchased through Foodbank NSW and the sale of FoodCare vouchers to other local organisations to give to their clients. Local businesses donate food from time to time and through our Farm it Forward program, local gardeners donate excess fruit and vehgetables. One local supermarket (and supplier) has supported FoodCare through a Winter Appeal and a Christmas raffle.

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

FoodCare provides low-cost (purchased food) and free (all donated food and groceries) to people living in and around Orange who are on low incomes and are food insecure. Typically, people will be receiving income support through Centrelink, may be casually employed,homeless, living with a disbility, mental health, be frail aged or be experiencing domestic and family violence. Foodbank's 2024 Hunger Report confirms that food insecurity has reached a critical point and that almost half of low-income households have faced food insecurity in 2024. "48% of households with less than $30,000 in income are food insecure. More than half of food-insecure households in Australia are enduring the most severe level of hardship, which means they are skipping meals, reducing portion size or going entire days without eating". We have networked extensively, sought regular media coverage and worked hard to ensure peolple know about FoodCare and how we can assist with this on-going crisis. Locally, more people are accessing food relief and more often.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

More and more people who are either homeless or in temporary accommodation such as hotels or motels, are living in their cars or are 'couch surfing' are presenting to FoodCare. Whilst FoodCare has received an enormous level of support through food drives at local schools, pre-schools, clubs and individuals, food that is suitable for people in temporary accommodation is not often donated. These types of foods/personal care products may include pre-prepared microwaveable meals, high protein energy bars and other sources of non-cook high energy protein, canned fish, pet food, dried fruit and nuts and easily transportable foods and drink. The expected outcome is that we will be able to meet the specialised needs of this group of very vulnerable people until their circumstances are improved.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of organisation if applicable) FoodCare Orange Incorporated

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 22 October 2024

Print name Alexandra Ruse

Position in organisation Secretary/Public Officer

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Domestic Abuse Prevention Orange (DAPO)
Contact name:	Joel Palmer
Position:	Co-Founder
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):

YOUR ORGANISATION

☐ Not-for-Profit ☑ Community Group

Please provide a short description of your organisation, and its purpose.

DAPO was formed in 2023 as a community-driven group specifically looking at how we can prevent family and domestic abuse from occuring in the first place.
Whilst several services are already in place for early intervention, crisis support and recovery, there's a gap in our region of programs and events targeted at addressing the drivers of gender-based violence and family/domestic abuse and preventing FDV from occuring at all.
DAPO meets monthly, with additional meetings as needed for project work.
DAPO has held information stalls at Harmony Day and the No More rally at the Naylor Pavilion. DAPO participated in the 16 Days of Activism Against Gender-based Violence in 2023, and is again planning an event for the 2024 program, our "What Can I Do?" men's information night.

YOUR REQUEST

Amount requested: $ 10,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

This is our first application for funding.
All efforts thus far have been possible through in-kind donations from members and supporters of DAPO.

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

Our region has been experiencing a family and domestic abuse crisis for years. While there are several groups advocating for interventions and support for victims, DAPO seeks to address the void in the prevention space of family and domestic abuse.
DAPO has worked to raise awareness of prevention actions since we formed in 2023. We advocate for education of members of the public, professionals, educators and anyone interested in or in a position to change the status quo.
DAPO was part of the 16 Days of Activism Against Gender Based Violence program in 2023, and is presenting our "What Can I Do?" Men's Information Night as part of the 2024 program of events.

Our event addresses the social issues of Domestic and Family Abuse and Mental Wellbeing.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

Building upon the success of our previous events, DAPO is planning a Professional Development & Community Education Series in 2025.
DAPO seeks funding from the Social Impact Grant Program to cover the costs of venue hire, catering, speaker fees and promotion for our Professional Development and Community Education Series.
3 targeted professional development events (one each for health, education and legal practice) and one community education event will be provided in this series.
DAPO is currently engaging with the Hannah Clarke Foundation, the Women And Girls Emergency Centre (WAGEC) and Domestic Violence NSW to coordinate and deliver these events next year. We have approached several local businesses and organisations as possible host venues, and will be finalising these in the near future.
As an outcome of this series, DAPO hopes to increase the knowledge, understanding and skills of professionals in healthcare (including frontline workers), education and legal practitioners who come face-to-face with victims and survivors every day. Our Community Education event will further develop the understanding of FDV by members of the community as well as helping drive further actions.

DAPO plans to assist in the prevention of family and domestic abuse in the Orange region by presenting events such as these into the future.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of organisation if applicable) Domestic Abuse Prevention Orange (DAPO)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 29/10/24

Print name Joel Palmer

Position in organisation Co-Founder

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

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APPLICANT'S DETAILS

Name of organisation:	Housing Plus
Contact name:	Rochelle Monaghan
Position:	Events, Fundraising, Engagement & Volunteer Coordinator
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
83 147 459 461	147 459 461

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Housing Plus are a leading not-for-profit Community Services Provider and Tier 1 Community Housing Provider (CHP). We are a progressive social enterprise offering an integrated model of community services programs and accommodation services, re-investing all profits into improving social outcomes for individuals and communities in Regional NSW for over 40 years.

Our vision and aim are to improve people's lives through independence and choice.

Our purpose is to provide safety, comfort, housing, and support services for disadvantaged and marginalised communities across regional and remote NSW.

YOUR REQUEST

Amount requested: $ 10,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

We will leverage our existing pool of volunteers to lead and/or help facilitate activities and groups for free, and where necessary only purchase materials or services from the local community to deliver activities (for example, a yoga or dance teacher, tickets to events) where these cannot be sourced in-kind in the first instance.

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

Housing Plus are a leading regional Tier 1 CHP with a 40-year history providing client-centred tenancy and property management services to communities experiencing entrenched disadvantaged across regional NSW. In 2023/2024, we managed a portfolio of 1,255 properties across social, affordable, and specialist accommodation, supporting 2,741 tenants.

A separately branded subsidiary, Plus Community, delivers our portfolio of community services, including homelessness, employment, post-release supports, and domestic and family violence services. In 2023/2024 we supported 9,575 clients to access person-centred, trauma-informed, and strength-based supports, empowering them to effectively address their individual needs.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

Donation use: Deliver a social 'Connections Program' providing access to free, peer-based local activities and groups for Housing Plus social housing tenants in Orange, particularly those aged 55+, who may be experiencing (or at-risk of) isolation and require additional social support to actively participate in the community.

Expected outcomes: We anticipate participants will experience reduced levels of social isolation and loneliness, increased sense of belonging in their community, and improved mental health and wellbeing.

Change to Orange LGA: In our 2023 Client Satisfaction Survey, social housing tenants specifically reported low Personal Wellbeing Index scores of 58, which is below the national benchmark of 66 for low-income households. We aim to enhance/build social connections between people with similar lived experience, as a powerful tool to overcome adversity and prevent mental health issues (in 2024, HealthStats reported mental health related hospitalisations in Western NSW as 1.6 times greater than averages across other NSW LHDs). By encouraging participation from local volunteers, businesses, and community stakeholders, we can create support networks to address social isolation and loneliness for vulnerable tenants, and provide access to existing community assets to sustain positive mental health and wellbeing outcomes long-term.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of organisation if applicable) Housing Plus

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 30 October 2024

Print name Anthea Basha

Position in organisation Company Secretary

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Impact Church Orange
Contact name:	Dallas Holmes
Position:	Community & Outreach Coordinator, Youth Group assistant
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
24004350798	004350798

YOUR ORGANISATION

☑ Not-for-Profit ☑ Community Group

Please provide a short description of your organisation, and its purpose.

Impact Youth is the youth group which operates at Impact Church Orange. We currently see up to 35 youth each Friday night during school terms in attendnace with number steadily increasing.
We provide a completely free program for highschool ages children to attend in a fun and safe environment. We provide opportunity for young to people to make friends, particiate in activities we coordinate with and for them and we give very short spritual and inspirational talks most friday nights as they explore life, spirituality, purpose and community.
The vast majority of our young people attending are from the Glenroi community, but many also from other parts of town. We pick up and drop off each friday night to make sure that the kids that want to come but cant get there another way can actually attend.
We are having a significant positive impact on the young people that attend with very positive feedback from the youth and from there families.

YOUR REQUEST

Amount requested: $ $10000.00

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

We are completely funded by the church, through small donations as people feel to give and by selling drinks to the kids during the youth program.

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

We are having a direct impact on the safety and wellbeing of many young people living in the Glenroi area. Many of them face domestic violence, housing insecurity, poverty and are exposed to drug misuse, all things that create unsafe or inappropriate environments for children and has direct harmful impacts on a childs mental and physical wellbeing and deveopment. Additionally, there are other children from other areas also being directly impacted in regards to their mental wellbeing as our program provides them with a predictable and regular social event that they look forward to each week, providing fun and positve shared experiences with their peers. These all provide experiences of safety and positve community which has direct impacts on the development and wellbeing of young people as they grow.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

This donation will be used to go toward upgrading some of the hall we use for the program to make it more fit-for-purpose in accommodating the youth and ensuring the hall is suitable for years to come.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of organisation if applicable)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 30/10/2024

Print name Dallas Holmes

Position in organisation Ministry Coordinator

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted

APPLICANT'S DETAILS

Name of organisation: The Colour City Rainbow Hub

Contact name: Cassandra Trenqove

Position: Director

Postal address

Phone: Mobile:

Email:

ABN (if applicable): 41273114335

ACN (if applicable):

Orange City Council
Scanned
31 OCT 2024
CONTAINER No.
E2709-25

YOUR ORGANISATION

☐ Not-for-Profit ☑ Community Group

Please provide a short description of your organisation, and its purpose.

The Rainbow Hub is an LGBTQIA+ Information Hub for Orange NSW.

At the moment we are still in the process of setting the organisation up (like applying for Non-for-profit), but we do already have our online directory for local LGBTQIA+ safe business & resources up & running (and growing) and also have a makeshift gazebo set up for a "Information Tent" for events.

YOUR REQUEST

Amount requested: $ 15,500

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

So far we have gained any funding through sales of Pride merchandise at our information tent at events & donations (mostly by myself)

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

We provide information & promote the safety of LGBTQIA+ in our community. The Online directory provides a list of safe businesses and resources that people can look up from the safety of their homes & phones. The Information Hub provides a physical presence.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

As well as a professional branded gazebo for our information tent we also would like to use our larger gazebo for a "quiet space" at events (including comfortable seating & industrial earmuffs). We also would like to create a portable LGBTQIA+ library ~~book~~ initially starting with a trailer (instead of a vehical to minimise maintenance costs) that will double as transport for our information & quiet space tent set ups. I have included quotes for ~~Corner Bite~~ Gazebo's (including branding), signage for trailer, ~~trailer~~ trailer, seats & beanbags.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: _____ Account No: _____

Account Name: _____

Bank: _____

DECLARATION

On behalf of: (name of organisation if applicable)

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed _____ Date 31-10-24

Print name Cassandra Trengove

Position in organisation Director

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

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commercial printing

FROM
Megan Death

BY
Print Storm
9 Peisley Street
Orange NSW 2800
Australia

EMAIL
sales@printstorm.com.au

PHONE
(02) 6362 7411

WEBSITE
www.printstorm.com.au

ABN
62 109 230 515

TO
Cassandra .

EMAIL

ADDRESS
Orange NSW 2800
Australia

PHONE

FOR
Rainbow Hub

QUOTE NUMBER
132991

DATE
31 October 2024

VALID UNTIL
29 December 2024

3×3/3×6m Gazebos with D/S Walls

Artwork Fee (Standard) fee charged for design and preparation of all artwork. This is based on an hourly rate of $110 per hour, inc GST, and is an estimate only. The final price will depend on the amount of time expended by our designers.	$55.00
Supply 1 × 3×3 Gazebo with D/S Walls 3m x 3m Commercial Grade Marquee Canopy, Frame, Full Colour Printed on Canopy, 1 x Double Sided Rear Wall, 2 x Double Sided Side Walls Printed in Full Colour (Kit Includes Ground Pegs, Tie-Down Ropes, Carry Bag	$2,542.50 $2,542.50 × 1
Supply 1 × 3×6m Gazebo with D/S Walls 3m x 6m Commercial Grade Marquee Canopy, Frame, Full Colour Printed on Canopy, 1 x Double Sided Rear Wall, 3 x Double Sided Side Walls Printed in Full Colour (Kit Includes Ground Pegs, Tie-Down Ropes, Carry Bag	$3,492.50
GST 10%	$553.64
Total AUD including GST	**$6,090.00**

3×3/3×6m Gazebos with D/S Walls

Total AUD including GST $6,090.00

Your Order/Reference Number

Optional

Additional Comments

Optional

☐ Yes, I Cassandra . accept this quote and have read and agree to the terms below.

Accept Quote Decline this quote...

Designs & Proofs

Any design component included in this quote is based on a time estimate. Additional work carried out that exceeds the design time allowed for in this quote will be charged at the standard rate for design and layout. At the time of this quote, the standard rate for design and layout is $90 per hour, inc GST.

Proofs provided by Print Storm are an indication of the final printed product only. PDF proofs are not colour accurate. If you are concerned about the reproduction of colours, you may wish to request a hard copy proof. Please note that an additional fee applies for all hard copy proofs.

You are solely responsible for any proof that you accept. This includes all design, spelling, grammar, numbers, layout and all associated content. We will print/supply exactly what is accepted in the final proof. We will not reproduce any product at our expense unless the issue with your final product is related to a printing error that we have made.

Turnaround & Delivery

Turnaround varies from job to job. Our average turnaround time for most digitally printed products is 2-3 working days from artwork approval, and 4-5 working days from artwork approval for offset printed jobs. This is not a guarantee, and should only be treated as a guide.

Unless otherwise agreed upon in writing, Print Storm does not guarantee delivery of your jobs by a specific date. If you have a critical deadline to meet, please discuss this with us prior to accepting this quote so we can make every effort to meet your target deadline for you.

Print Storm will not be held liable for printing products that are lost, damaged or delayed when delivered by post or courier. It is your responsibility to provide a suitable address or PO Box to ensure the safe arrival of

your printed goods. If an incorrect address is provided to us, a re-delivery fee may apply with some couriers, and this will be on-billed to you.

Accounts & Payment

All orders must be paid in full before work commences on your job, with the exception of account holders. Large projects (in excess of $10,000) may require an up front deposit before work will commence.

Payments by EFT (Electronic Funds Transfer) or cheque must be processed and cleared before any work will commence on your job. Print Storm reserves the right to suspend web and cloud services for clients with overdue accounts.

Overdue accounts will incur a monthly administration fee of $25 and/or interest charges of 10% p.a. (per annum), calculated monthly. In the event that your overdue account is referred to a collection agency and/or law firm, you will be liable for all costs which would be incurred as if the debt is collected in full, including legal demand costs.

printstorm
commercial printing

FROM
Megan Death

BY
Print Storm
9 Peisley Street
Orange NSW 2800
Australia

EMAIL
sales@printstorm.com.au

PHONE
(02) 6362 7411

WEBSITE
www.printstorm.com.au

ABN
62 109 230 515

TO
Cassandra .

EMAIL

ADDRESS
Orange NSW 2800
Australia

PHONE

FOR
Rainbow Hub

QUOTE NUMBER
132994

DATE
31 October 2024

VALID UNTIL
29 December 2024

Alupanel Trailer Signage 1820 × 600mm

Print 2x Alupanel Trailer Signage 1820 × 600mm Production: 3mm Composite Aluminium Panel, 3M 5yr Self Adhesive Vinyl (Matt), UV Gloss Overlaminate, Printed in Full Colour (UV), Cut to Size Artwork to be Supplied Print Ready	**$531.10**
GST 10%	$48.28
Total AUD including GST	**$531.10**

Alupanel Trailer Signage 1820 × 600mm

Total AUD including GST $531.10

Your Order/Reference Number

Optional

Additional Comments

Optional

☐ Yes, I Cassandra . accept this quote and have read and agree to the terms below.

Accept Quote Decline this quote...

Designs & Proofs

Any design component included in this quote is based on a time estimate. Additional work carried out that exceeds the design time allowed for in this quote will be charged at the standard rate for design and layout. At the time of this quote, the standard rate for design and layout is $90 per hour, inc GST.

Proofs provided by Print Storm are an indication of the final printed product only. PDF proofs are not colour accurate. If you are concerned about the reproduction of colours, you may wish to request a hard copy proof. Please note that an additional fee applies for all hard copy proofs.

You are solely responsible for any proof that you accept. This includes all design, spelling, grammar, numbers, layout and all associated content. We will print/supply exactly what is accepted in the final proof. We will not reproduce any product at our expense unless the issue with your final product is related to a printing error that we have made.

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Unless otherwise agreed upon in writing, Print Storm does not guarantee delivery of your jobs by a specific date. If you have a critical deadline to meet, please discuss this with us prior to accepting this quote so we can make every effort to meet your target deadline for you.

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Payments by EFT (Electronic Funds Transfer) or cheque must be processed and cleared before any work will commence on your job. Print Storm reserves the right to suspend web and cloud services for clients with

Tax Invoice / Receipt

PETS & SADDLERY
MULLION PRODUCE

MULLION PRODUCE
3 EDWARD STREET
ORANGE, NSW 2800

Ph 02 6361 7499
mullionpayables@gmail.com
ABN 44104375742 Sale I0000009905 Date 30/10/2024

Delivery Note: 2 X Side Doors and 1x Rear door

Customer Details:
The Rainbow Hub
Cassandra
#1053

Deliver To: Order No: Quote
Cassandra

Orange
NSW 2800
AUSTRALIA

Description	QTY	GST	Unit Price	Total
^ Roshar 8x5 Box 2t Dual Axle TRADIE Box	1	$681.82	$7500.00	$7500.00

Signature: _____

BSB: **062 534** **Acct No:** **1052 6537**

Thank you for shopping at
Mullion Produce.

Sub Total	$7500.00
Rounding	$.00
Total	**$7500.00**
^GST Total	$681.82
Invoice Balance	$7500.00
Due Date :	29/11/2024

BIGW

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0184 BIG W Orange PH: 1300 411 875
Cnr Anson And Kite Streets
ABN 88 000 014 675

PRICE QUOTE
QUOTE ONLY VALID UNTIL 07/11/2024

	$
#237299 BBSC 200L JetBla	
Qty 10 @ $18.00 each	180.00
#2828640 BFIR 100L Large Bag	
Qty 17 @ $11.00 each	187.00
27 SUBTOTAL	$367.00
TOTAL	$367.00

#Taxable Items
TOTAL includes GST $33.36

Thank you for shopping at BIG W.

STORE 0184 POS 033 TRANS 3085 09:32 31/10/2024

INTERIM PRINT

*** STORE USE ONLY ***
31/10/24 9:46 792 SALES 2813 1046 021

%PADDED CHAIR
8 @ 52.00 9341109712656 416.00
SUBTOTAL 416.00

END INTERIM PRINT

seating for quiet space

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Western PTSD Support
Contact name:	Andrew Greig
Position:	Coordinator/Chair
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
34 657 359 576	657 359 576

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Western PTSD Support provides critical clinically lead adjunctive support to members of our community who live with diagnosed PTSD. Although our group has been providing life-saving support for our attendees since 2019, we have faced closure twice prior. Once due to an administration change within a WA based charity in 2020, whereby our group was no longer supported with a clinician or finance, and once more when Open Arms (DVA) support was cut in June of this year because we extend support to anyone with a diagnosis, not just to veterans, which is outside their purview. Lifeline Central West are currently supporting us to keep our doors open, so that we may continue to provide lifesaving support.

YOUR REQUEST

Amount requested: $ 35,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

We rely on generosity of the community. Both facilitators are working at reduced rates and/or expenses are being absorbed by other organisations. We have reached an in-principle agreement with Lifeline Central West (LCW) for legal/insurance coverage and financial coverage for facilitation and related expenses up to $25,000.00 p/a. to be annually reviewed. St John of God Richmond Hospital provide one facilitator, currently free of charge with no assurances of continued support. Orange Legacy provide our meeting venue free of charge but have suggested that this should be revisited 'at a later date'

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

Unsupported PTSD patients often suffer from numerous debilitating comorbidities and may exhibit serious anti-social behaviour including isolationism, aggression, violence, self-prescription of - and addiction to - drugs and alcohol, abusive or coercive tendencies, suicide, and homicidal tendencies. PTSD is an exhausting diagnosis to carry. Many individuals succumb to the above-mentioned comorbidities or behaviours before they announce to their friends, families, colleagues, and employers that there is something so wrong with them that they need to 'go away' as an in-patient. As the Central West has extremely limited support with PTSD, it is literally 'going away' to a confronting, and often triggering place, usually in Sydney. Our primary function is to create a safety net for critical sufferers between treatment, making life bearable, work on recovery, and delay the need to enter an in-patient programme in Sydney, etc. We do this by offering clinically facilitated group therapy sessions and constructing healthy 'check-in' systems and anti-isolation networks. Our clinicians are nationally regarded experts and pioneers in PTSD treatment and trauma related group therapy. Both have worked extensively with and for Defence and veterans, as well as first responders for decades.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

We are at the whim of other organisations. If any element changes, we are at risk of collapse and will leave many people stranded without support which can be fatal for some. At present, with significant benevolence, we should just be able to cover costs (+/-$200), but have no room for contingency. We would utilise this money to produce marketing material such as logos, letterheads, business cards, create a website with a donation feature, setting aside funds for hosting, a domain name and email accounts, subscribe to a clinical archiving system, suitable for Clinical-in-Confidence documentation, purchase subscription services, such as a video conference platform, grants portals, etc. Further funding would expedite research into our saleable training packages significantly reducing the projected timeline and put us in a self-funded position earlier than expected.Initial funding would help us create an organisation that is all at once low maintenance and desirable for continued support, but also viable if our agreement is terminated.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of org applicable) Western PTSD Support

☑ I certify to the be nowledge that the statements made in this application and any supporting documentation are true.

Signed Date 29 October 2024

Print name Andrew Craig

Position in organisation Coordinator/Chair

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

Western PTSD Support

Financial Snapshot and Budget Projection

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Western PTSD Support

Financial Snapshot and Budget Projection

Current Financial Situation

Financially, we are relying heavily on the generosity of the local community and have no growth potential.

Both facilitators are working at reduced rates and/or expenses are being absorbed by other organisations.

We have reached an in-principle agreement with Lifeline Central West (LCW) for legal/insurance coverage and financial coverage for facilitation and related expenses up to $25,000.00 p/a. to be annually reviewed.

St John of God Richmond provide one facilitator, currently free of charge with no assurances of continued support.

Orange Legacy provide our meeting venue free of charge but have suggested that this should be revisited 'at a later date'.

WPS has no finances of its own, but instead is in a financial house of cards with significant risk of collapse that is ultimately untenable.

Snapshot

Item:	**Budget P/M**	**Realised Expenses**
Facilitation:		
Travel Expenses	$500.00	
Meal Allowance	$100.00	
Accommodation	$400.00	
Compensated Hours	$1000.00	
Subtotal	$2000.00	$700.00 - $1000.00
Venue Hire:	$50.00 (wear and tear)	$0.00
Catering:	$50.00	$0.00 - donated
Monthly Total:	$2100.00	$700.00 - $1000.00
Annual Total:	$25,200.00	$8,400.00 – $12,000.00

Western PTSD Support

Financial Snapshot and Budget Projection

Business Plan

The need for a grant at present is paramount. No amount of planning or wishful thinking will execute this plan without a seed grant. While we currently provide a service, we are entirely at the whim of numerous other organisations. If any element changes, we are at risk of collapse and will leave many people stranded without support which can be fatal for some. At present, with significant benevolence, we should just be able to cover costs (+/-$200), but have no room for contingency, no ability to choose where we spend money, and can guarantee no security to our attendees.

Immediate

Our immediate and necessary goal is to reduce our reliance on the kindness of others. This situation is a house of cards at present and untenable long term. A chief goal of ours is to become self-reliant with long term growth.

A one-off grant would be viewed as a seed and primarily spent on creating a saleable brand so that we could generate further income, grants, and donations. The members of our social engagement panel are deeply embedded within the community, with corporate and philanthropic connections. What we need is an investable presence. We would utilise this money to;

- Produce marketing material such as logos, letterheads, business cards, etc.,
- Create a website with a donation feature, setting aside funds for hosting,
- Purchase a domain name and create email accounts,
- Subscribe to a clinical archiving system, suitable for Clinical-in-Confidence documentation,
- Purchase other subscription services, such as a video conference platform, grants portals, Internet, etc.,
- Purchase administration hardware such as a phone, tablet, and laptop,
- Establish a social media presence, and;
- Publish corporate facing promotional material in softcopy.

After the above, would set a sum of approximately $2000 aside to cover unforeseen and emergency expenses such as;

- Grants writing related expenses,
- Accounting and audit related expenses,
- Legal expenses,
- Emergency facilitator related expenses, such as last-minute accommodation charges, and;
- ACNC registration and DGR status.

Further funding would expedite research into our saleable training packages significantly reducing the projected timeline and put us in a self-funded position earlier than expected.

Initial funding would help us create an organisation that is all at once low maintenance and desirable for LCW to continue to support, but also viable if our agreement is terminated.

Western PTSD Support

Financial Snapshot and Budget Projection

Urgent Short-term

Our immediate-to-short-term growth steps are to source qualified, suitable, and local clinical facilitators. This will insulate us from the difficulties that commonly occur with bringing facilitators from Sydney. It will also reduce our costs as meal allowances, compensated hours, and accommodation expenses will be reduced or removed. Our present Sydney-based facilitator expense is projected at $24,000.00 p.a. Whereas we project local facilitators to be up to 85% cheaper, freeing up considerable funds and removing local pressures.

Concurrently, we would commence establishing a peer/second programme, aiming at lived experience volunteers. Peers would be utilised for support between meetings, and in periods leading up to in-patient programmes, and post completion of in-patient programmes. They would also be available to make 'check-ins' on attendees deemed to be approaching a 'risk' phase. During meetings, a Peer works as a Second to the facilitator, allowing for constant presence in the case that either one must leave the room.

We aim to have these two elements established within 18 months of funding.

Short term

Once local facilitators and peers are established, we would begin to promote the group to the wider healthcare community, but not without expanding our services to more meetings, both geographically and in frequency as we currently risk over-attendance and support many attendees who travel several hours to meetings.

This requires a business model of an investible NFP with significant presence to generate further investment/grants/donations.

Medium term

Within 3 years, we aim to be in a position of offering support (or guided/subsidised access to support) for attendees who seek further services related to PTSD and its comorbidities, such as:

- Transportation support
- Executive support
- Financial support for in-patient programmes,
- Tertiary healthcare related to PTSD and comorbidities,
- Therapeutic treatment options such as;
    - Social groups,
    - Gardening groups,
    - OT/ PT groups
    - Equine Therapy, etc.
- Social inclusion and anti-isolation programmes
- Tailored educational programmes

Western PTSD Support

Financial Snapshot and Budget Projection

Long term

Building on our close relationships with St John of God, Richmond Hospital and the Pro Patria Centre in Wagga Wagga, WPS aims to emulate aspects of their treatment and support packages, such as:

- Providing facilities for visiting specialists to provide related services. To address symptoms and related elements including but not limited to; depression, confusion, external stressors, isolationism, and substance abuse which are all potential elements of Complex PTSD.
- Providing services – or access to services – tailored to individuals with executive disfunction, declined cognitive ability and de-motivation, we hope that we may remove the sink-or-swim dread that is prevalent in PTSD sufferers trying to navigate piecemeal services.

By this stage, we will require staff and a premises to work from, as well as significant buy-in from the healthcare and social work communities.

WPS Clinical Advisory Board are investigating the veracity of SMART (Self-Management and Resilience Training), aiming to convert it to civilian application. We aim at making a saleable training programme for State Police, First Responders, Corrections Officers, etc.. This initiative is indicative of our desire to broaden our scope to include prevention over cure, and to create a financially viable organisation.

A further goal is to explore the viability of providing group 'check-in' or awareness training services to first responders and similar workforces that experience high rates of PTSD diagnoses.

Forecast

The predominance of the above is well beyond the scope of any one proposed grant, and we are well aware of this, It is only covered here to emphasise our dedication to this objective and that we have an established, chronological projection.

As for future funding, we have only recently established our relationship with LCW enough to direct funding through them, and as yet have not been able to afford to operate as a donatable entity ourselves. We have however, opened promising conversations with several bodies.

Professional mentoring, development guidance and network sharing is being provided by LCW, Top Blokes Foundation, and Pro Patria Centre.

Without further detail to elaborate on as of yet support in principle has been offered for our long-term viability from LCW, Pro Patria Centre, Orange City Council, Cadia Valley Mining Operations (Newmont), St John of God Health Care, Ramsay Health Care, RSL NSW, Legacy NSW, Bulk Liquids Industry Association, and Orange Ex-Services' Club.

We have also commenced collaborative conversations with organisations including, but not limited to Veritas House, Headspace, LikeMind (by Stride), Neami Orange, Orange Suicide Prevention Network, Uniting, WellWays, AngliCare, The Salvation Army, BaptistCare, The Benevolent Society, and Rotary Club of Orange.

Western PTSD Support

Financial Snapshot and Budget Projection

Budget Projection*

*Snapshot not including CPI increases. Estimations made are based on today's operating costs and expenditures (27/10/2024) – There is expected variance on running costs over future fiscal years.

Immediate

Item	Projected Cost	Projected Ongoing p.a.
Current running costs:	$25,200.00 (-$25,000.00)	$200.00
Marketing material & design	$2,000.00	$200.00
Promotional material	$1,000.00	$200.00
Social Media	$500.00	$100.00
Website development	$5,000.00	$500.00
Domain	$500.00	$500.00
Software subscriptions	$500.00	$500.00
Other software related	$1,000.00	$100.00
Clinical Archiving System	$1,200.00	$1,200.00
IT Support	-	$1,000.00
Utilities:		
Internet	$300.00	$800.00
Priority phoneline	-	$1,400.00
Hardware:		
Phone	$1,500.00	$800.00
Tablet	$700.00	$350.00
Laptop	$2,500.00	$900.00
NFP registration related	$500.00	-
ACNC registration related	$500.00	-
DGR status related	$500.00	-
Grants writing related expenses	$1,000.00	$1,000.00
Accounting and audit related expenses	$1,000.00	$1,000.00
Legal expenses	$1,000.00	$1,000.00
Emergency facilitator related expenses	$2,000.00	$2,000.00
Rent	$600.00	$600.00
Total:	**24,000.00**	**$14,350.00**

Western PTSD Support

Financial Snapshot and Budget Projection

Urgent short term

Item	Projected Cost	Projected Ongoing p.a.
Facilitator training	$10,000.00	$10,000.00
Peer programme	$20,000.00	$20,000.00
Total:	**$54,000.00**	**44,350.00**

Short term

Item	Projected Cost	Projected Ongoing p.a.
Meeting group expansion:		
Facilitation:		
(local)	*$300.00 p/m*	$3,600.00
(travelling)	*$1,000.00 p/m*	$12,000.00
Peer incidentals (local)	*$200.00 p/m*	$2,400.00
Catering	*$50.00 p/m*	$600.00
Rent:	*$50.00 p/m*	$600.00
Total per meeting (local)	*$600.00*	**$7,200.00**
Total per meeting (travelling)	*$1,300.00*	**15,600.00**
Expand to 4 new local meetings:	*$2,400.00*	**$28,800.00**
Expand to 10 new local meetings:	**$6,000.00**	**$72,000.00**
Research related:	$10,000.00	$10,000.00
Total (expansion of 4 meetings):	**$66,400.00**	**$83,150.00**
Total (expansion of 10 meetings):	**$70,000.00**	**$126,350.00**

Western PTSD Support

Financial Snapshot and Budget Projection

Medium term

Item	Desired input	Projected Ongoing p.a.
Transportation support	$20,000.00	$20,000.00
Executive support	$5,000.00	$5,000.00
Financial support for in-patient programmes	$10,000.00	$10,000.00
Tertiary healthcare	$20,000.00	$20,000.00
Therapeutic treatment options such as;		
Social groups,	$10,000.00	$10,000.00
Gardening groups,	$5,000.00	$1,000.00
OT/ PT groups	$5,000.00	$5,000.00
Equine Therapy	$2,000.00	$2,000.00
ETC.	$10,000.00	$10,000.00
Social inclusion and anti-isolation programmes	$10,000.00	$10,000.00
Tailored educational programmes	$5,000.00	$5,000.00
Research	$30,000.00	$30,000.00
Total (expansion of 4 meetings):	**$198,400.00**	**$211,150.00**
Total (expansion of 10 meetings):	**$202,000.00**	**$254,350.00**

Long term

Item	Desired input	Projected Ongoing p.a.
Facilities	$2,000,000.00	$50,000.00
Office	$300,000.00	$20,000.00
Meeting spaces	$100,000.00	$5,000.00
Facilities for visiting practitioners	$200,000.00	$10,000.00
Staffing		
Executive	$600,000.00	$600,000.00
Administration	$270,000.00	$270,000.00
In-house Facilitators	$220,000.00	$220,000.00
Custodial	$70,000.00	$70,000.00
Research	$150,000.00	$150,000.00
Extended services	$100,000.00	$100,000.00
Training Packages	$50,000.00	*
Practitioner space hire	-	*
Total (expansion of 4 meetings):	**$4,258,400.00**	**$1,706,150.00**
Total (expansion of 10 meetings):	**$4,262,000.00**	**$1,749,350.00**

* The expectation is to expand on these items, refining their saleability so that the organisation becomes financially self-sustaining.

Western PTSD Support

Clinical Advisory Board

Members

Below is an alphabetical list of the Clinical Advisory Board of Western PTSD Support with a brief list of their qualifications and experience relevant to their work on this board.

Fitz-Gerald, Sean 2
Gow, Heather 3
Mills, Collette 4
Peterson, Steven 5

Western PTSD Support

Clinical Advisory Board

Fitz-Gerald, Sean

Founder, WPS

Facilitator, WPS

Group facilitator specialising in PTSD and Trauma Informed Care.

Relevant Qualifications

- Dip. Applied Science, Nursing, Kuring-gai CAE
- Registered Nurse, trauma specialist

Relevant Experience

- Group Facilitator, St. John of God Healthcare Richmond
- Peer Support Coordinator, Open Arms - Veterans & Families Counselling
- Clinical Nurse Consultant - Trauma Mental Health, St John of God Health Care Richmond
- Research and education in the area of adult trauma resulting in Post Traumatic Stress
- Defence Liaison Officer, St John of God Health Care Richmond
- Nursing Unit Manager, Xavier Ward – Australia's premier PTSD unit
- Lead practitioner in PTSD and Trauma informed care
- Early developer of group therapy for PTSD.

Western PTSD Support

Clinical Advisory Board

Gow, Heather

Facilitator, WPS

Practicing Clinical Psychologist

Relevant Qualifications

- a BPsych(Hons), Charles Sturt University
- registered psychologist with AHPRA

Relevant Experience

- Lived experience Peer trainer
- Specialised in trauma psychology
- Open Arms (formerly VVCS) - Veterans and Families Counselling Service (a branch of the Department of Veterans Affairs) in various roles including:
    - counsellor providing individual, couple and family counselling to Australian veterans and their families,
    - Leadership roles involving the implementation and integration of lived experience peer work to Open Arms's clinical workforce and the development of community partnerships in line with Open Arms's model of care.
- Private Practice focussing on:
    - Individual and couple counselling services,
    - Clinical supervision services, and;
    - Treatment of trauma, including early childhood trauma as well as single and multiple incident traumatic events.
- Trained in approaches including:
    - Cognitive behaviour therapy,
    - Schema therapy,
    - Internal family systems therapy, and;
    - Evidence-based trauma-focused interventions including:
        - Prolonged exposure therapy,
        - Eye movement desensitisation and reprocessing, and;
        - Cognitive processing therapy.
- Various roles in both public and private sectors including:
    - Assessment and brief treatment interventions with the Department of Human Services,
    - Counselling and critical incident response with an EAP provider,
    - Employment rehabilitation services, and;
    - private practice.

Western PTSD Support

Clinical Advisory Board

Mills, Collette

Practicing Clinical Psychologist

Relevant Qualifications

- MSocSc (Industrial Psychology) Cum Laude, University of Natal, South Africa.
- BSocScHons (Clinical Psychology), University of South Africa
- BSocSc (Psychology & Nursing), University of Natal, South Africa.
- Numerous self-development and in-house training courses.

Relevant Experience

- Member and registered with Australia Psychological Society (APS)
- Australia Health Practitioner Regulatory Agency (AHPRA).
- Member of College of Organisational Psychologists.
- Practicing clinical Psychologist focussing on:
    - Medicare,
    - Employee Assistance Programmes (EAP),
    - Victim's Services,
    - Veterans Counselling (Open Arms),
    - Mediation and Conflict resolution,
    - WorkCover, and;
    - Critical Incident work.
- Regional Manager in occupational rehabilitation business, involving:
    - WorkCover case management supported wage assessments,
    - Workplace modification assessments,
    - Job capacity and psychological assessments,
    - Vocational assessments,
    - Job capacity account services and treatment provision,
    - Employee assistance services, and;
    - Management of the vocational rehabilitation services contract.
- Assessment and development centres; the use and analysis of individual and organisational diagnostics (including Psychometric Instruments)
- Team building workshops and interventions
- Organisational restructuring
- Individual vocational and career guidance
- Analyses and marketing
- Previous line management and specialist consulting experience in Human Resources in commercial, public and non-governmental organisations.
- Psychologist & Regional Manager, Occupational Rehabilitation, Orange, NSW.
- Industrial Psychologist and Human Resources Consultant, Self-employed.
- Associate Consultant, Management & HR, PriceWaterhouseCoopers, Harare.
- Senior Human Resources Consultant, PriceWaterhouseCoopers, Harare.

Western PTSD Support

Clinical Advisory Board

Peterson, Steven

Practicing General Practitioner

Relevant Qualifications:

- MBBS, ANU
- FRAC-GP
- Cr, Orange City Council
- Finance for Directors, AICD
- Foundations of Directorship, AICD

Relevant Experience:

- Board member, Spinal Cord Injuries Australia (SCIA)
- SIRA Spinal injury clinical advisory group member
- Clinical Governance Committee, Wangarang
- Clinical governance RCA, Orange base hospital
- Chairperson Ageing and access committee Orange city council
- Chairperson Health liaison committee Orange city council
- Non-executive board member Live better (clinical governance role)
- 'Jesus club', a church group aimed at adults with an intellectual disability
- Participant 'Get a grip' research project, NEURA
- Virtual rural generalist service NSW WLHD
- Remote GP service roster RaRMS telehealth NSW MLHD
- Doctor WYLA drug and alcohol detox & rehabilitation service
- Medical educator GP Synergy and RACGP
- Consultant COVID role Aspen medical
- General practice telehealth role, Colour city medical practice Orange
- Doctor telehealth GP consultations
- VMO Benjamin Short Grove residential care unit
- Medical representative, PHN Western Aboriginal health Council
- Instant consult telehealth GP consultations
- GP at Orange Aboriginal Medical Practice, NSW.
- VMO Orange Base Hospital Emergency Department & Ambulatory Care
- Senior GP Registrar at Derby Aboriginal Health Service, WA
- GP Registrar at Orange Aboriginal Medical Practice, NSW
- GP Registrar at West Wallsend Medical Practice, NSW
- Resident medical officer, Cairns base hospital, QLD.
- Medical representative, PHN Western Aboriginal health Council
- Volunteer in aged care visitors participation scheme.
- Organizer fundraiser 'Creating connections' spinal research UTS

Western PTSD Support

Clinical Governance Document

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Western PTSD Support

Clinical Governance Document

1. Preliminary

1.1. Purpose

1.1.1. The purpose of this document is to provide clinical governance instruction of Western PTSD Support (WPS) and to identify the structure of WPS as it relates to clinical governance.

1.1.2. Where appropriate, this document will refer to supplementary documents that are required for further information.

1.2. Supplementary documents

1.2.1. It is important to note that all supplementary documents listed below have been created in by clinicians in conference, specifically to offer a safe and supportive environment for facilitators and participants alike, within Western PTSD Support.

1.2.2. The supplementary documents relevant to clinical governance are:

1.2.2.1. Western PTSD Support - Governing Document V1.1.1 26JUN2024
1.2.2.2. Western PTSD Support - Escalation Protocol v1.1.1 11JUN2024
1.2.2.3. Western PTSD Support - Facilitator Guidelines V1.1.1 11JUN2024
1.2.2.4. Western PTSD Support - Participant Guidelines v1.1.1 11JUN2024
1.2.2.5. Western PTSD Support - Registration Form v1.1.1 11JUN2024

1.3. Definitions

1.3.1. Adjunct/Adjunctive means that, with regard to support provided by the Association or any subordinate element within the Association, support is supplementary to a participant's mental healthcare and not an essential component.

1.3.2. Advisory Board is and shall remain a collection of vested interest individual members with experience and/or expertise in a field that will benefit the execution of the object.

1.3.3. Clinical means Work involving the diagnosis and/or treatment of patients, including recommending preventative action, conducted by a clinician, that is not otherwise considered adjunctive. Based on a definition by The Australian Institute of Health and Welfare.

1.3.4. Clinician means a medical practitioner who is involved in the diagnosis and/or treatment of patients, including recommending preventative action. Defined by The Australian Institute of Health and Welfare.

1.3.5. Diagnosis is limited to PTSD for the purpose of this document; the identification of PTSD by examination of the symptoms in accordance with DSM-5, by an Australian registered healthcare professional (specifically, a general practitioner, psychologist, or psychiatrist) who has experience in PTSD treatment and diagnosis.

1.3.6. Facilitator means an Australian accredited clinical health professional who is experienced in mental health groupwork, specifically PTSD support. Nominated by members, vetted by the appropriate members of the advisory board and appointed by the committee.

1.3.7. Group refers to the meetings held by facilitators for the benefit of the participant, in the execution of the object.

1.3.8. Participant is an individual member of the public who meets the criteria, and has fulfilled their obligations to receive support, and has engaged with the association at a group/facilitator level, and is receiving support/ has received support from group/the association without the association withdrawing its support.

1.3.9. Peer is an accredited but non-clinical subordinate to the facilitator of a group.

1.3.10. Posttraumatic Stress Disorder; The association uses the New South Wales Ministry of Health definition of posttraumatic stress disorder (20 May 2022)

1.3.10.1. which is:

1.3.10.1.1. "[T]he development of a set of reactions in people who have experienced a traumatic event that might have threatened their life or safety, or others around them. Examples of traumatic events can include war or torture, serious accidents, physical or sexual assault, or disasters."

1.3.10.2. The association uses 'The Diagnostic and Statistical Manual of Mental Disorders', (DSM-5), definition that:

1.3.10.2.1. "PTSD is an anxiety disorder triggered by exposure to actual death, the threat of death, serious injury and/or sexual violation."

1.3.10.3. The association subscribes to the 'DSM-5 Exhibit 1.3-4 DSM-5 Diagnostic Criteria for PTSD'.

1.3.10.4. The association subscribes to the 'DSM-IV to DSM-5 Post-traumatic Stress Disorder Comparison Children 6 Years and Younger'.

1.3.10.5. Furthermore, the association remains open to further research, especially the idea of five types of posttraumatic stress disorder, being;

1.3.10.5.1. Type 1 – Normal Stress Response

1.3.10.5.2. Type 2 – Acute Stress Disorder

1.3.10.5.3. Type 3 – Uncomplicated PTSD

1.3.10.5.4. Type 4 – Complex PTSD

1.3.10.5.5. Type 5 – Comorbid PTSD

1.3.10.6. The association does not prefer or discriminate between 'Post traumatic stress disorder', 'Post-traumatic stress disorder', 'Posttraumatic stress disorder', 'PTSD', or any variation of capitalisation of the above wording.

1.3.10.7. Referred to in this document as 'PTSD'.

1.3.11. Second means:

1.3.11.1. A person who fits all the requirements of a facilitator but is working in a subservient role to the facilitator, or

1.3.11.2. A person who does not fit either the requirements of a facilitator, or a peer but is working towards one of the two outcomes, with the approval of the facilitator, and; deemed necessary by the Peer/Training Officer and/or the facilitator, either for the group, or the association to be present in a formal role.

1.3.12. Support means any organised assistance offered by the association to a participant. Support can be withdrawn at any time, without clarification from the association, without formally recording the revocation of support, and without notifying the participant.

Western PTSD Support

Clinical Governance Document

2. Advisory Board

2.1. As stated in the definition, the Advisory Board is to be a collection of vested interest individual members with experience and/or expertise in a field that will benefit the execution of the object.

2.2. The Advisory board is non-hierarchical. No member has veto power. All members' value is weighted in accordance with the subject being reviewed, on a case-by-case basis.

2.3. The advisory board must endeavour to employ members for their relevant skillsets and expertise, and respectively, all members of the board must remain cognisant of their specific skillsets and expertise, as well as their deficits, and defer to a more expert member in all areas of function and deliberation.

2.3.1. For example, a non-clinical member of the advisory board should critically analyse their value to a clinical discussion, where experts are present, and consider deferring to those with greater training, qualifications, and expertise. Conversely, in a conversation about participant experience, this dynamic may shift.

2.4. All advisory board members are encouraged to work autonomously and seek agreement from the other members when decisions are required.

2.5. The advisory board seeks to reach unanimous agreements through discussion. This approach is to be favoured over voting.

2.6. Weight of opinion considered within discussions is to be organic, dynamic and in flux, depending on the subject at hand and the expertise or experience of the individuals, not controlled by oratory skill, dominant personalities, or other elements that are not relevant to finding the best outcome for the participants.

2.7. All positions within the advisory board can be held by any individual, overlapping with other roles if necessary, as long as the specific roles qualifications are met.

2.7.1. Example: The coordinator may also be the Psychological Advisor, the Peer/Training Officer, a member of the Clinical Advisory, and the Facilitator, providing that person has the qualifications to fill all these roles.

2.8. There must be a minimum of four members of the advisory board.

2.9. There must be a minimum of three members of the clinical advisory.

2.10. Any creation or alteration of a document aimed at any clinical or group therapy aspect must be reviewed and approved by the clinical advisory.

2.11. Roles within the Advisory Board:

2.11.1. All roles within the advisory board are to be nominated by the advisory board and appointed by the committee. Further details on the committee can be found in the governing document.

2.11.2. An attempt should be made to fill all roles within the advisory board; however this is not necessary. The number of members and positions occupied within the advisory board is at the discretion of the advisory board and the committee, however a minimum of four (4) members is required.

2.11.3. Refer to the Governing Document for all further information regarding the structure, make-up, and rights & responsibilities of the Advisory Board that are not covered below.

Western PTSD Support

Clinical Governance Document

2.12. Advisory Board Positions:

2.12.1. Coordinator
- 2.12.1.1. Leads the Advisory Board. Must be an individual, nominated by the Advisory Board and appointed by the committee.

2.12.2. Psychological Advisor
- 2.12.2.1. Must be a medical professional with significant experience in PTSD. Responsible for assessing and proposing alterations to all aspects of support offered, to provide current, innovative support.
- 2.12.2.2. Responsible for introducing all new pertinent research to the association for assessment and potential integration.

2.12.3. Legislative and Governance Advisor
- 2.12.3.1. Expertise in the legal and governance aspect of providing the services required to fulfil the association's object.

2.12.4. Group Officer
- 2.12.4.1. Responsible for the running of groups in accordance with the association's obligations, balance groups to meet the requirements of participants.
- 2.12.4.2. Responsible for enforcing appropriate conduct of the facilitator and association/ advisory board/ facilitator relationship management.

2.12.5. Peer/Training Officer
- 2.12.5.1. Responsible for suitability, training, accreditation, and appropriate conduct of peers/seconds.

2.12.6. Clinical Advisory
- 2.12.6.1. Any creation or alteration of a document aimed at any clinical or group therapy aspect must be reviewed and approved by the Clinical advisory.
- 2.12.6.2. The clinical advisory should be comprised of:
  - 2.12.6.2.1. Members of the Advisory Board who have professional clinical experience.
  - 2.12.6.2.2. Medical/healthcare professionals.
  - 2.12.6.2.3. Preferably, people who have experience in mental health, specifically PTSD.

2.12.7. Community Advisory
- 2.12.7.1. Expanded on in the Governing Document.

2.12.8. Facilitator
- 2.12.8.1. A clinician with an in-depth knowledge of groupwork and PTSD treatment. This role does not necessarily have to be part of the Advisory board, but preferably is. Responsible for enforcing appropriate conduct of the peer/second.
- 2.12.8.2. Any alterations to the position or availability of the facilitator should be treated as urgent and highest priority.
- 2.12.8.3. The opinions of regular meeting participants are to be carefully reviewed as to the suitability of the facilitator.
- 2.12.8.4. The facilitator does not need to be a member of the association, but is required to enforce and abide by all group rules; the participant guidelines.

2.12.8.5. If the facilitator is not a member of the association, they cannot be a member of the advisory board and must rely on direction from the group officer or other appropriate member of the advisory board.

Western PTSD Support

Clinical Governance Document

3. Group/Facilitation

3.1. The Facilitator, Peers, Seconds, and every other person present at meetings enters into a privacy and confidentiality agreement with the participants.

3.2. The Facilitator, Peers, and Seconds are to be aware of and function within their requirements to the meetings, the association, the Object, the HRIP Act, the PPIP Act, and all other relevant Acts, rules, state, and federal laws.

3.3. The Facilitator is responsible for enforcing the privacy and confidentiality agreement stated in subclause 3.1 and in the governing document.

3.4. The Facilitator is responsible for understanding, adhering to, and implementing the facility emergency protocols, where necessary.

3.5. The Facilitator is responsible for the appropriate navigation of the participant defined group practices that are covered in the document 'Participant Guidelines'.

3.6. The Facilitator is to adhere as closely as is practicable to the instructions to facilitators that are covered in the document 'Facilitator Guidelines'.

3.7. The facilitator remains cognisant that groups constitute adjunct support and that any clinical knowledge shared does not constitute clinical care being provided.

3.8. Facilitators are responsible for;

3.8.1. Adjudication of groups,

3.8.2. Insuring registration of participants,

3.8.3. Making participants aware that groups constitute adjunct support and that any clinical knowledge shared does not constitute clinical care being provided.

3.8.4. Implementing the escalation protocol that is covered in the document 'Escalation Protocol' immediately, when necessary,

3.8.5. Ensuring privacy and security of participants shared information, written or otherwise,

3.8.6. Monitoring the behaviour and conduct of Peers/Seconds, and;

3.8.7. Delegating any of the above listed responsibilities in this-document or in the documents listed in clause 1.2.

3.9. The delegation of any duty/responsibility/role does not absolve the Facilitator of overall responsibility.

3.10. Stability of the groups are to be protected as a high priority by the Facilitator and by extension, the association.

3.10.1. Set on the second Wednesday of each month, starting at 10am, 12 months per year. A strict date set as to not affect routine for participants.

3.10.2. Located at Legacy House, 58 McNamara St, Orange.

3.11. Any and all temporary changes to subclauses 3.10.1 and 3.10.2 are to be handled on an ad-hoc basis at the lowest organisational level possible, whether that be consultation between the facilitator, peers/seconds and participants, or by popular request from participants, etc. to avoid inferred didacticism and disenfranchisement.

3.12. Any and all permanent changes to subclauses 3.10.1 and 3.10.2 are to be conducted with the highest sensitivity to the participants and with as much transparency as possible.

Western PTSD Support

Clinical Governance Document

3.13. Any and all additions, alterations or removals of peers and seconds are to be handled on an ad-hoc basis at the lowest organisational level possible, exampled as per subclause 3.10.3, to avoid inferred didacticism and disenfranchisement.

3.14. Any and all permanent changes to the facilitator are to be conducted with the highest sensitivity to the participants and with as much transparency as possible.

3.15. Meetings are open to all registered individuals with a diagnosis of PTSD, but strictly closed to those without a PTSD diagnosis, with the exception of;

3.15.1. Facilitators,

3.15.2. appointed peers,

3.15.3. appointed Seconds, and;

3.15.4. other individuals with prior approval from the Advisory board, after special consideration has been taken with regards to the mental health and privacy of the participants.

3.16. Meetings will continue to maintain an extant set of rules that have previously been laid down by participants, under the guidance of the facilitator.

Western PTSD Support

Clinical Governance Document

4. Participants

4.1. A participant is defined at 1.3.9. further to this, it is the responsibility of the association to enforce 'Chinese' or ethical walls between the participants and the association, the committee, the advisory board and all other elements of WPS other than their specific group, for various reasons.

4.2. It should be considered highly unusual that a participant be considered to become a member, or ever attend a meeting of the association.

4.3. Both the privacy of the members and of the participants should be held in strict confidence wherever possible.

4.4. It is the role of the facilitator, the peer/second or another appropriate person within the advisory board to liaise appropriate information between the association and the participants.

4.5. It is the role of the Facilitator to ensure that participants meet the following criteria;

4.5.1. Register for the group in full, on document 'Registration form',

4.5.2. Sufficiently indicate that they have a PTSD diagnosis,

4.5.3. Follow the guidelines established in document 'Participant Guidelines',

4.5.4. Are deemed 'safe', and not a risk to themselves or others,

4.5.5. Respect the privacy and security of other participants, and;

4.5.6. Do not have access to the private and sensitive information recorded by other participants, facilitators, peers, seconds, or any other individuals present at meetings without express, uncoerced permission from the other party involved.

Western PTSD Support

Clinical Governance Document

5. Escalation Protocol

5.1. Escalation protocol is a roadmap to enacting the best course of action for relevant likely scenarios that may affect facilitation and/or participants.

5.2. The supplementary document; Escalation Protocol is recorded as a series of scenarios, responses, and appropriate escalations.

Western PTSD Support

Clinical Governance Document

6. Custody of Clinical Records

6.1. All documentation that may be reasonably construed as private and confidential, medical or patient – in confidence, personal information, or sensitive in nature to an individual or group must be kept in a secure and private location, by an appropriate member of the advisory board, as decided by the advisory board, in accordance with Health Records and Information Privacy Act 2002 (HRIP Act) which applies to health privacy, and Privacy and Personal Information Protection Act 1998 (PPIP Act) which applies to non-health personal information, for all documents relating to individual participants.

6.2. The committee may refuse to allow a member to inspect or obtain a copy of a document under this clause:

6.2.1. That relates to confidential, personal, commercial, employment or legal matters, or

6.2.2. If the committee considers it would be prejudicial to the interests of the association for the member to do so, or

6.2.3. That is held, owned, created or otherwise in the possession of the advisory board, that is covered by this clause, the HRIP Act, and the PPIP Act, or any combination of the listed clause, subclause, or Acts listed in this subclause or in the governing document.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Orange and District Early Education Program Inc (ODEEP)
Contact name:	Kylie Streatfeild
Position:	CEO
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
96 088 506 143	

YOUR ORGANISATION

☑ Not-for-Profit ☐ Community Group

Please provide a short description of your organisation, and its purpose.

Orange and District Early Education Program (ODEEP) provides specialist early childhood intervention to children who are aged between 0-12 years who have a disability and/or delay, through the provision of speech therapy, occupational therapy, educational support, physiotherapy, dietetics and child and family support. ODEEP also provides a range of other services including aqua therapy, supported playgroups, parent support groups, capacity building, and inclusion support in early education settings. ODEEP is a registered provider of support services under the National Disability Insurance Scheme (NDIS) and receives a small amount of other funding to carry out the range of services outlined above. ODEEP also operates and manages a mainstream community based preschool program, Pinnacle Preschool.

ODEEP has an excellent reputation in the Orange and surrounding areas and values our partners and stakeholders in the community. We value service delivery that is ethical and based on best practice principles and evidence-based practice.

YOUR REQUEST

Amount requested: $ 58,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

There is an identified need for a program supporting the mental health and wellbeing of families who have children with additional needs and families who attend our programs.

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

Many families in our community are facing increased social isolation, declining mental health and wellbeing challenges. Having a child with a disability and/or developmental delay can be incredibly challenging, which may impact their ability to undertake normal daily tasks, affect marital and other relationships, participate in the workforce, attend outings where they can have positive social interaction as well as seek the supports and information that they need in their parenting role. Through the provision of early intervention, supported playgroups, child care and other supports ODEEP aims to reduce these challenges faced by families, with research showing that the earlier intervention is provided the better the outcome. in the past ODEEP utilised a number of funding options to provide family support where needed, but under current funding models this support is difficult to provide, if at all. Over the past four years, we have seen a vast increase in the number of families who are isolated and have mental health and wellbeing needs. We have also seen an increase in the complexity of the issues faced by families who do not have access to necessary support services, specific to their needs, particularly those that have a child with a disability/delay.

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

We would like to use the donation to provide child and family support services. These services would be provided to parents who access all of the services listed above, and would include the provision of individual or family based models of support, the provision of parenting information, advocacy, referral, intensive support where needed, parenting programs such as Circle of Security, Triple P etc, light touch therapy and capacity building to increase knowledge and skills. Through our services we see many first nations, CALD (particular those who have newly arrived into Aust), socially isolated or disadvantaged families, we also have a large number of dads accessing our services. We intend, through the provision of the child and family support services, to increase parental capacity, confidence, skill and knowledge about parenting. We hope to support those that are going through various stages of grief in their journey of having a child with a disability. It is intended to link more families to the services and supports that they need, such as domestic violence, housing and health services. We aim to empower families to advocate on their, and their child's behalf, to reduce social isolation as well as increase access to a multi-disciplinary team of allied and education professionals. It is important to take time to engage families, to provide "soft entry" to services and supports and build relationships that allow parents to feel safe and secure when accessing services and supports. We aim to increase parents knowledge about child development, assist families to access early learning centres and support successful transitions to school. In NSW, for every $1.00 invested, $3.80 is seen in social and economic benefit and we believe that through this program families and children in the orange local government area will benefit for years to come.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of organisation if applicable) ODEEP

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 30/10/24

Print name Orange and District Early Education Program Inc. Kylie Streatfeild

Position in organisation Chief Executive Officer (CEO)

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

ORANGE CITY COUNCIL

APPLICATION FORM

Social Impact Funding Grant

This document will be made public, and only fields with this icon will be redacted.

APPLICANT'S DETAILS

Name of organisation:	Level up youth services PTY LTD
Contact name:	Shane Oudin
Position:	CEO
Postal address	
Phone:	Mobile:
Email:	
ABN (if applicable):	ACN (if applicable):
7066 461 4886	664 614 886

YOUR ORGANISATION

☑ Not-for-Profit ☑ Community Group

Please provide a short description of your organisation, and its purpose.

Level Up youth services is currently servicing Orange and greater Sydney including the Illawarra. We provide youth between the ages of 12 - 24 a wide range of supports from mentoring, drug and alcohol, mental health and youth homelessness supports. For the last 24 months we have made significant impacts in keeping youth safe and providing trained and qualified staff to assist the reduction in youth suicide and keeping youth away from the judicial systems. Our 2025 mission is to increase our foot print in Western NSW to provide a larger range of youth supports. Level up youth is also in the process of becoming a non for profit organisation

YOUR REQUEST

Amount requested: $ 50,000

How else does this project gain funding, including other sources such as grants, requests for in kind donations or reduction in costs from suppliers?

Level up Youth is only currently funded by NDIS supports and Fee for services. Once our non for profit applications are complete we can conduct fundraiser and other forms of grants

Describe the social impact area your organisation addresses and how the organisation has addressed it in the past (Note: Social Impacts areas include things like Food Supply, Housing, Domestic or Family Abuse, Mental Wellbeing, Accessibility etc.)

We address several key components- Drug and alcohol, mental health in both male and female clients, juvenile justice supports and education and employment supports. Mentoring is our framework

What will this donation be used for, and what outcomes do you expect to achieve and how this project/fund will make a change to the Orange Local Government Area?

Providing youth in the region a location to gain the above supports. Using the grant to establish a safe space for youth to be supported by qualified staff.

BANK ACCOUNT DETAILS FOR PAYMENT

BSB No: Account No:

Account Name:

Bank:

DECLARATION

On behalf of: (name of organisation if applicable) Level Up Youth Services PTY LTD

☑ I certify to the best of my knowledge that the statements made in this application and any supporting documentation are true.

Signed Date 30/10/2024

Print name Shane Oudin

Position in organisation Director, CEO

The information you provide will be handled in accordance with the Privacy and Personal Information Protection Act 1998. The supply of information by you is voluntary. If you cannot provide or do not wish to provide the information sought, your application may be unable to be processed. Any personal information collected from you will be in order to process your application.

5.15 STRATEGIC POLICY REVIEW - POST EXHIBITION

RECORD NUMBER: 2024/1332
AUTHOR: Janessa Constantine, Manager Corporate Governance

EXECUTIVE SUMMARY

This report presents Strategic Policy ST08 – Fraud & Corruption Prevention which has been reviewed, on public exhibition and now recommended for adoption. The policy has been on exhibition for the period 16 September 2024 – 18 October 2024. No submissions were received.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy "18.1. Provide representative, responsible and accountable community governance".

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

The Strategic Policy has been on public exhibition for 28 days prior to adoption. The Policy was endorsed by Council's ARIC at its meeting on 26 June 2024.

The Fraud & Corruption Prevention Plan will be provided to the Chief Executive Officer for approval following the policy adoption.

RECOMMENDATION

That Council resolves to adopt Strategic Policy ST08 – Fraud & Corruption Prevention.

FURTHER CONSIDERATIONS

Consideration has been given to the recommendation's impact on Council's service delivery; image and reputation; political; environmental; health and safety; employees; stakeholders and project management; and no further implications or risks have been identified.

SUPPORTING INFORMATION

ST08 – Fraud & Corruption Prevention

Reference	Update
General	• Re-written policy. • Policy includes model elements from the NSW Audit Office, Independent Commission Against Corruption and Australian Standard for Fraud & Corruption Control AS8001:2021. • The Policy was endorsed by Council's ARIC at its 26 June 2024 meeting. • The accompanying Operational Plan is pending approval by the CEO following the exhibition period and adoption of this policy.

ATTACHMENTS

1 FOR ADOPTION - Strategic Policy - ST08 - Fraud and Corruption Prevention, D24/51393⇩

ORANGE CITY COUNCIL

Strategic Policy ST08

Fraud & Corruption Prevention

FOR ADOPTION

PO Box 35, Orange
NSW 2800 Australia

135 Byng Street, Orange
NSW 2800 Australia

P: +61 2 6393 8000
F: +61 2 6393 8199

council@orange.nsw.gov.au
www.orange.nsw.gov.au

ORANGE CITY COUNCIL

All policies can be reviewed or revoked by a resolution of Council, at any time.

1 PURPOSE

The purpose of this policy is to outline Council's commitment to the prevention, detection, investigation and correction of corrupt and fraudulent activity.

2 APPLICABILITY

This policy applies to all areas of Orange City Council including Staff, Councillors, Contractors, Council Delegates, Committee Members and any other person who performs official functions on behalf of Council such as Volunteers. This Policy is to be read in conjunction with Orange City Councils Code of Conduct.

3 OBJECTIVES

3.1 We are committed to protecting Orange City Council's revenue, expenditure, assets and reputation through awareness, prevention, detection, investigation and action of any suspected or actual instance of fraud and corruption.

3.2 Council is committed to promoting an organisational culture that will not tolerate any actual or attempted act of fraud or corruption. This policy is designed to put this principle into practice.

3.3 Council will provide avenues for Fraud and Corruption to be distinguished from other forms of unethical behaviour.

3.4 Council is committed to establishing a plan aligned with the Australian Standard for Fraud and Corruption Control (AS 8001-2021).

4 PRINCIPLES

Ethical Conduct

4.1 All persons identified in this policy are expected to adhere to the highest of ethical standards, avoid conflicts of interest and act in the best interest of the community.

Transparency

4.2 Council commits to transparency in our financial transactions, decision-making processes and interactions with the public, stakeholders and other Government agencies.

Accountability

4.3 All persons identified in this policy are held to account for any fraudulent or corrupt activities which occur within or impact our organisation or the community.

Reporting

4.4 Council will establish clear and accessible mechanisms for reporting suspected fraudulent or corrupt conduct, protecting those who report any suspected wrongdoing.

Compliance

4.5 Council will comply with all applicable legislation, regulation and standards related to fraud and corruption.

5 WHAT IS FRAUD & CORRUPTION?

Fraud

5.1 Fraud refers to dishonest activity, by a Council official or external person, causing actual or potential financial loss to Council, including the theft of money or other property.

5.2 Fraud includes the deliberate falsification, concealment, destruction or improper use of documentation that is used, or intended, for normal business purposes. It also includes the misuse of information or one's position for personal financial benefit.

Corruption

5.3 Corruption involves dishonest activity in which a Council official acts contrary to the interests of Council to obtain benefits or advantages for themselves, another individual or entity.

5.4 In accordance with Australian Standard for Fraud and Corruption Control (AS 8001-2021), 'Corruption' may also encompass actions by the entity itself, or by someone claiming to represent and act in its interests, aimed at gaining an improper advantage for the entity, either directly or indirectly.

FOR ADOPTION

ORANGE CITY COUNCIL

All policies can be reviewed or revoked by a resolution of Council, at any time.

6 GENERAL

Relationship to Other Policies and Plans

6.1 Council has developed policies and processes to facilitate the prevention & reporting of suspicions of corrupt or fraudulent conduct. These include the:

- Code of Conduct
- Code of Meeting Practice
- Statement of Business Ethics
- Public Interests & Internal Reporting Policy
- Fraud & Corruption Plan
- Complaint Management Policy
- Customer Service Obligation Policy
- Risk Management Policy
- Cyber Security Policy
- Gifts & Benefits Policy
- Secondary Employment Policy
- Purchasing Policy
- Internal and External Committee Charters

Public Interest Disclosures

6.2 The Public Interest Disclosures & Internal Reporting Policy (ST11), helps staff make protected disclosures in accordance with the Public Interest Disclosures Act 2022 and sets out procedures for making disclosures to Council and disclosures to appropriate external agencies including provisions for disclosures to be properly investigated and dealt with.

6.3 Council's Fraud and Corruption Prevention Plan outlines the process for dealing with fraud and corruption risks.

Fraud and Corruption Plan

6.4 The Fraud and Corruption Plan provides information and instruction for the operation of the framework including the responsibility structures, prevention mechanisms, awareness, detection, reporting, investigation and actions relating to conduct identified as fraudulent or corrupt.

Reporting

6.5 The Chief Executive Officer and Public Officer are authorised to receive reports of fraudulent and/or corrupt conduct. Where the matter relates to conduct of the Chief Executive Officer, reporting is to be made to the Mayor.

6.6 Reports may also be made to external agencies including:

- NSW Police
- Office of Local Government
- NSW Independent Commission Against Corruption (ICAC)
- NSW Ombudsman.

6.7 Reports can be made to Council via the following channels:

- Phone: 02 6393 8000
- Email: council@orange.nsw.gov.au
- In Person: 135 Byng Street, ORANGE NSW 2800
- Writing: PO BOX 35, ORANGE NSW 2800

6.8 Anonymous Reports may be submitted, and will be managed according to the same processes, however it is suggested that staff or Councillors identify themselves in order to provide necessary protections and support under the PID Act where required.

FOR ADOPTION

ST08 – Strategic Policy – Fraud & Corruption		
Review Due: November 2024	Version 1_24	Last Revision: 2 November 2021
Approved By:	Minute Number:	Approval Date:

5.16 CHRISTMAS/NEW YEAR RECESS 2024/2025

RECORD NUMBER: 2024/1657
AUTHOR: Jen Sharp, Director Corporate & Commercial Services

EXECUTIVE SUMMARY

This report seeks approval to close The Civic Centre, Giyalang Ganya, Central West Libraries and Works Depot for the Christmas period from Wednesday 25 December 2024 to Wednesday 1 January 2025 (inclusive) and for Council to delegate authority to the Mayor, Chairperson of the Planning and Development Committee and the Chief Executive Officer to determine development applications and planning matters (except matters that cannot be delegated under Section 377(1) of the Local Government Act) over the recess period.

This has been standard practice in past years to ensure the development application processes and deadlines are managed and that staff are able to take a break over the Christmas period.

Traditionally, this is a quiet time for Council, however some services continue to operate, and staff are on-call in the event of an emergency. Council Meetings are also not generally held in January. The first meeting in 2025 is proposed for 18 February 2024.

LINK TO DELIVERY/OPERATIONAL PLAN

The recommendation in this report relates to the Delivery/Operational Plan strategy “18.1. Provide representative, responsible and accountable community governance”.

FINANCIAL IMPLICATIONS

Nil.

POLICY AND GOVERNANCE IMPLICATIONS

The delegation of authority to the Mayor, Chairperson of the Planning and Development Committee and the Chief Executive Officer will be in accordance with the Local Government Act 1993. Matters unable to be considered by this delegation will be referred to the next meeting after the recess period, scheduled for 18 February 2024.

RECOMMENDATION

That Council resolves:

1 **The Civic Centre, Giyalang Ganya, Central West Libraries and Works Depot close down for the Christmas period from Wednesday 25 December 2024 to Wednesday 1 January 2025 (inclusive);**

2 **During the period 25 December 2024 to 7 February 2025, Council delegate its function to determine development applications and planning matters, with the exception of matters that cannot be delegated under the Local Government Act 1993 or the Environmental Planning and Assessment Act 1979, in circumstances where it is unreasonable to defer consideration of the matter, to the Mayor, Chairperson of the Planning and Development Committee, and the Chief Executive Officer (so that the Chief Executive Officer and either the Mayor OR the Chairperson of the Planning and Development Committee, are available to determine matters).**

FURTHER CONSIDERATIONS

The recommendation of this report has been assessed against Council's other key risk categories and the following comments are provided:

Service/Project Delivery	Essential services will remain open or be available over the Christmas New Year period. Keeping the close down period to a minimum and having essential services on call will ensure services continue to be provided to the community. Council's after hours service Marvasti Security will refer matters to on call staff as required. The proposed delegation over the recess period will ensure the timely determination of applications and planning matters over this period, ensuring Council's level of service can be maintained. This will also ensure that applicants are not unreasonably delayed.	
Reputation/Political	A request for approval for the proposed Christmas Closedown will be submitted to the Council meeting.	
People & WHS	Employees will be able to enjoy a closedown period between Christmas and New Year. This is also an effective tool in managing work/life balance and leave balance levels.	

SUPPORTING INFORMATION

This year Christmas Day falls on a Wednesday, and the gazetted public holidays are Wednesday 25 December 2024, Thursday 26 December 2024 and Wednesday 1 January 2025.

Based on the gazetted public holidays the following is recommended for consideration for Council to close services including the Civic Centre, Giyalang Ganya, Central West Libraries and the Works Depot for the three days on Friday 27 December, Monday 30 December and Tuesday 31 December 2024.

Date	NSW Gazetted Public Holidays	Recommended Shut Down
Wednesday, 25 December 2024	Christmas Day Public Holiday	
Thursday, 26 December 2024	Boxing Day Public Holiday	
Friday, 27 December 2024		Close down day*
Saturday, 28 December 2024	N/A	N/A
Sunday, 29 December 2024	N/A	N/A
Monday, 30 December 2024		Close down day
Tuesday, 31 December 2024		Close down day
Wednesday, 1 January 2025	New Year's Day Public Holiday	

**Note: The union picnic day public holiday is proposed on this date for financial members of the USU, DEPA and LGEA.*

As in previous years arrangements for services are proposed as follows:

Disability and Residential Support Workers – Additional Public Holiday

Disability Services does not have a close period. However, as per the *Local Government Aged, Disability and Home Care (State) Award*, Disability and Residential Support Workers are entitled to an additional public holiday. This will be on Monday, 30 December 2024. Those working will be eligible for public holiday rates.

End of Year Arrangements – Other Services

As in previous years arrangements for services are proposed as follows:

- The Visitor Information Centre will be open except Christmas Day.
- The Caravan Park will be open, with a staff member on call Christmas Day (office closed).
- The Aquatic Centre will be open except Christmas Day. The centre will also close at 6pm on Christmas Eve and New Year's Eve. On Boxing Day and New Year's Day the Aquatic Centre will be open Public Holiday Hours 12pm-6pm.
- The Resource Recovery Centre will be open every day except Christmas Day with waste collections to remain unchanged.
- Children's Services generally close for a 2–3-week period with specific closures detailed and dates of leave for staff are:

Centre/Service	Last day Children	Last day Staff	Staff first day	First Day Children
Courallie	Friday 20 December 2024	Friday 20 December 2024	Monday 13 January 2025	Wednesday 15 January 2025
Yarrawong			Monday 6 January 2025	Wednesday 8 January 2025
Spring Street				

Centre/Service	Last day Children	Last day Staff	Staff first day	First Day Children
Family Day Care Office		Friday 20 December 2024	Monday 6 January 2025	
Before and After School Care and Vacation Care	Friday 20 December 2024	Friday 20 December 2024	Monday 6 January 2025	Monday 6 January 2025 – Vacation Care starts
Occasional Care	Friday 20 December 2024	Friday 20 December 2024	Thursday 9 January 2025	Monday 13 January 2025

Council staff working at Civic Centre, Central West Libraries, Giyalang Ganya and the Works Depot would be required to take a maximum three days leave during the closedown, and Council's normal after-hours service would operate during that period.

Under the Leave Policy and Procedure all employees, excluding casuals, will be able to accumulate time as part of their normal flexible working hours or rostered day off arrangements to be taken during the Christmas Closedown period (subject to an operational need to work the additional hours). In circumstances where an employee does not have the required accumulated time, pro-rata annual leave shall be granted or leave without pay.

6 CLOSED MEETING - SEE CLOSED AGENDA

The Chief Executive Officer will advise the Council if any written submissions have been received relating to any item advertised for consideration by a closed meeting of Orange City Council.

The Mayor will extend an invitation to any member of the public present at the meeting to make a representation to Council as to whether the meeting should be closed for a particular item. In accordance with the Local Government Act 1993, and the Local Government (General) Regulation 2021, in the opinion of the Chief Executive Officer, the following business is of a kind as referred to in Section 10A(2) of the Act, and should be dealt with in a Confidential Session of the Council meeting closed to the press and public.

RECOMMENDATION

That Council adjourn into a Closed Meeting and members of the press and public be excluded from the Closed Meeting, and access to the correspondence and reports relating to the items considered during the course of the Closed Meeting be withheld unless declassified by separate resolution. This action is taken in accordance with Section 10A(2) of the Local Government Act, 1993 as the items listed come within the following provisions:

6.1 Works in Kind Agreement for Shiralee Road construction fronting Lots 1 & A DP381935, Lot 1 DP630681 & Lot 22 DP1212446

This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.2 Proposed Lease 6 Astill Drive Orange

This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.3 Proposed Sale 6 Astill Drive

This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.4 Lease Hangar Site E Orange Airport

This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.5 Lease Hangar Site EE Orange Airport

This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.1 WORKS IN KIND AGREEMENT FOR SHIRALEE ROAD CONSTRUCTION FRONTING LOTS 1 & A DP381935, LOT 1 DP630681 & LOT 22 DP1212446

RECORD NUMBER: 2024/1664
AUTHOR: Jason Theakstone, Manager Engineering Services

REASON FOR CONFIDENTIALITY
This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.2 PROPOSED LEASE 6 ASTILL DRIVE ORANGE

RECORD NUMBER: 2024/1670
AUTHOR: Shirley Hyde, Legal and Property Officer

REASON FOR CONFIDENTIALITY
This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.3 PROPOSED SALE 6 ASTILL DRIVE

RECORD NUMBER: 2024/1671
AUTHOR: Chris Rawlins, Manager Economic Development

REASON FOR CONFIDENTIALITY
This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.4 LEASE HANGAR SITE E ORANGE AIRPORT

RECORD NUMBER: 2024/1640
AUTHOR: Shirley Hyde, Legal and Property Officer

REASON FOR CONFIDENTIALITY
This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

6.5 LEASE HANGAR SITE EE ORANGE AIRPORT

RECORD NUMBER: 2024/550
AUTHOR: Shirley Hyde, Legal and Property Officer

REASON FOR CONFIDENTIALITY
This item is classified CONFIDENTIAL under the provisions of Section 10A(2) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

7 RESOLUTIONS FROM CLOSED MEETING