Information sheet for environmental audits and preliminary risk screen assessments (PRSAs)

Publication 2009 June 2021

Victoria's audit system

An environmental audit system has operated in Victoria since 1989. The *Environment Protection Act 2017* (the Act) provides for the appointment of environmental auditors. It also provides for Environment Protection Authority (EPA or the Authority) to have a system of preliminary risk screen assessments (PRSAs) and environmental audits. These are used in the planning, approval, regulation and management of activities, and in protection of human health and the environment.

Under the Act, the functions of an environmental auditor include to:

- conduct PRSAs and environmental audits
- prepare and issue PRSA statements and reports, and environmental audit statements and reports.

The purpose of a PRSA is to:

- assess the likelihood of the presence of contaminated land
- determine if an environmental audit is required
- recommend a scope for the environmental audit if an environmental audit is required.

The purpose of an environmental audit is to:

- assess the nature and extent of the risk of harm to human health or the environment from contaminated land, waste, pollution, or any activity
- recommend measures to manage the risk of harm to human health or the environment from contaminated land, waste, pollution, or any activity
- make recommendations to manage any contaminated land, waste, pollution or activity.

Upon completion, all PRSAs and environmental audits require preparation of either a PRSA statement, accompanied by a PRSA report, or an environmental audit statement, accompanied by an environmental audit report.

A person may engage an environmental auditor to conduct a PRSA or an environmental audit.

EPA administers the environmental audit system and ensures an acceptable quality of environmental auditing is maintained. This is achieved by assessing auditor applications and conducting a quality assurance program. These measures ensure that PRSAs and environmental audits that environmental auditors undertake are completed in accordance with the relevant sections of the Act or any other Act, and with the guidelines the Authority or other government agencies have published.

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Environment Protection Authority Victoria
GPO BOX 4395 Melbourne VIC 3001
1300 372 842 (1300 EPA VIC) **epa.vic.gov.au**

File structures

EPA stores digital statements and reports from PRSAs and environmental audits in three parts:

- Part A, the PRSA or environmental audit report
- Part B, report appendices
- Part C, the PRSA statement and executive summary or environmental audit statement and executive summary.

Report executive summaries, findings and recommendations should be read and relied upon only in the context of the whole document, including any appendices and the PRSA statement or environmental audit statement.

Currency of PRSAs and environmental audits

PRSAs and environmental audits are based on the conditions encountered and information reviewed at the time of preparation. They don't represent any changes that may have occurred since the completion date. As it's not possible for the PRSA or audit report to present all data that could be of interest to all readers, consideration should be made to any appendices or referenced documentation for further information.

When information about the site changes from what was available at the time the PRSA or environmental audit was completed, or where an administrative error is identified, an environmental auditor may amend or withdraw PRSA or environmental audit statements and/or reports. Users are advised to check EPA's website to ensure documents' currency.

PDF searchability and printing

EPA can only provide PRSAs and environmental audit statements, reports and appendices that the environmental auditor provided to EPA via the EPA portal on the EPA website.

All statements and reports should be in a Portable Document Format (PDF) and searchable; however at times some appendices may be provided as image-only PDFs, which can affect searchability.

The PDF is compatible with Adobe Acrobat Reader, which is downloadable free from Adobe's Website (www.adobe.com).

Further information

For more information on Victoria's environmental audit system, visit EPA's website or contact EPA's Environmental Audit Unit.

Web: www.epa.vic.gov.au

Email: environmental.audit@epa.vic.gov.au

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EPA VICTORIA

Preliminary risk screen assessment statement

Under Part 8.3 of the Environment Protection Act 2017

Publication F1031.3 published October 2023

The purpose of a preliminary risk screen assessment is:

(a) to assess the likelihood of the presence of contaminated land; and

(b) to determine if an environmental audit is required; and

(c) if an environmental audit is required, to recommend a scope for the environmental audit.

It is important to note that a PRSA is not an environmental audit statement or an environmental audit report. It should not be misconstrued as an environmental audit conducted to assess the suitability of a site for a proposed land use, or as a statement by the auditor on the extent of contamination, if present.

Further details are provided in the preliminary risk screen assessment report that accompanies this statement.

Section 1: Preliminary risk screen assessment overview

Environmental auditor details

Name:	Mr Philip Mulvey
Company:	Environmental Earth Sciences (VIC) Pty Ltd
Address:	98 Maribyrnong Street, Footscray
Phone:	03 9687 1666
Email:	pmulvey@eesigroup.com

Site owner or occupant

Name:	
Company:	Nadrasca Pty Ltd

Environmental auditor engaged by

Name:	Oliver Carroll
Company:	Knowles Group
Relationship to site owner:	Project Manager for proposed purchaser Arcare Pty Ltd

Reason for preliminary risk screen assessment:

Planning scheme:	Environmental Audit Overlay
Permit details (if applicable):	
Other:	
☐ Permit is attached (if applicable):	

Section 2: Assessment scope

Site details:

Address:	724-728 Whitehorse Road, Mitcham
Title details:	11028/290
Area (m^2):	6,019

☒ a plan of the site is attached

Use or proposed use assessed:

The below section details which land uses (current and proposed) the PRSA has assessed.

Land use categories

Note that sensitive land uses in the *Environment Reference Standard 2021* (ERS 2021) are categorised as lower and high density. Lower density is where there is generally substantial access to soil and high density is restricted to developments that make maximum use of available land space, and there is minimal access to soil. For planning purposes, children's playgrounds and secondary schools also trigger *Ministerial Direction No. 1* (MD No.1) and are therefore considered similarly to sensitive land uses.

Sensitive:

☒ High density: ☐ Other (lower density):

- ☒ Residential land use
- ☐ Child care centre
- ☐ Pre-school
- ☐ Primary school
- ☐ Secondary school

☐ Children's playground (indoor)

☐ Children's playground (outdoor)

Other:

☐ Recreation/open space
☐ Parks and reserves
☐ Agricultural
☐ Commercial
☐ Industrial
☐ Other land uses not captured by the above as described here:

Environmental elements assessed:

☒ Land
☐ all environmental values that apply to the land use category were considered **OR**
☐ all environmental values that apply to the land use category, other than the following, were considered:

☒ Water
Surface water
☐ all environmental values that apply to the applicable segment were considered **OR**
☐ all environmental values that apply to the applicable segment, other than the following, were considered:

Groundwater
☒ all environmental values that apply to the applicable segment were considered **OR**
☐ all environmental values that apply to the applicable segment, other than the following, were considered:

Standards considered:

Environment Reference Standard 2021
National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended from time to time
Ministerial Direction No. 1 (MD No.1)
Planning Practice Note (PPN) 30 (DELWP, 2021)
Environment Protection Act 2017

Assumptions made during the assessment or any limitations:

That the top 150mm of the site will be removed during site development works with soils removed in accordance with EPA document 1828.3 or their subsequent revisions.

Exclusions from the assessment and the rationale for these:

This statement is accompanied by the following preliminary risk screen assessment report:

Title:	Preliminary Risk Screen Analysis 724-728 Whitehorse Road, MItcham
Report no:	224070_PRSA_V01
Date:	28/02/2025

Section 3: Assessment outcome

☐ **Environmental Audit Required**	☒ **Environmental Audit Not Required**

Based on my assessment, I am of the opinion that an environmental audit is **required** *OR* **not required** for the following land uses, **including** the use or proposed use for which the site has been assessed.

Land use categories

Note that sensitive land uses in the ERS 2021 are categorised as lower and high density. Lower density is where there is generally substantial access to soil and high density is restricted to developments that make maximum use of available land space, and there is minimal access to soil. For planning purposes, children's playgrounds and secondary schools also trigger *Ministerial Direction No. 1* (MD No.1) and are therefore considered similarly to sensitive land uses.

Sensitive:

☒ High density: ☐ Other (lower density):

- ☒ Residential land use
- ☐ Child care centre
- ☐ Pre-school
- ☐ Primary school
- ☐ Secondary school

☐ Children's playground (indoor)

☐ Children's playground (outdoor)

Other:

- ☐ Recreation/open space
- ☐ Parks and reserves
- ☐ Agricultural
- ☐ Commercial
- ☐ Industrial

Note: An assessment that an environmental audit is not required does not include any comment on as to whether responsibilities under section 39 of the *Environment Protection Act 2017* (duty to manage contaminated land) exist for the person in management or control of the land. Please refer to EPA publication 1977, *Assessing and controlling contaminated land risks: A guide to meeting the duty to manage for those in management or control of land* (https://www.epa.vic.gov.au/about-epa/publications/1977).

Section 4: Environmental auditor's declaration

I state that:

- I am appointed as an environmental auditor by the Environment Protection Authority Victoria under the *Environment Protection Act 2017.*
- The findings contained in this statement represents a true and accurate summary of the findings of the preliminary risk screen assessment that I have completed.

Date: 03.03.25

Signed:

Name: M.J. Mulvey

Environmental Auditor

Interpreter

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ENVIRONMENTAL EARTH SCIENCES
CONTAMINATION RESOLVED

PRELIMINARY RISK SCREEN ASSESSMENT (PRSA) AT 724-728 WHITEHORSE ROAD, MITCHAM

KNOWLES GROUP PTY LTD

28 FEBRUARY 2025
224070
VERSION 1

ENVIRONMENTAL EARTH SCIENCES
CONTAMINATION RESOLVED

28 February 2025

Knowles Group Pty Ltd
346 South Road
Hampton East, VIC, 3188

Attention: **Mr Oliver Carroll**

Dear Oliver,

Preliminary Risk Screen Assessment (PRSA) at 724-728 Whitehorse Road, Mitcham, VIC

Please find enclosed a copy of our report entitled as above. Thank you for the opportunity to undertake this work.

This Preliminary Risk Screening Assessment concluded that it is unlikely that contamination is present, and no environmental audit is required for the development of the land for residential use.

Should you have any queries, please do not hesitate to contact us on (03) 96871666.

For and on behalf of
Environmental Earth Sciences VIC

Auditor
Philip Mulvey
Environmental Auditor (Contaminated Land) appointed pursuant to the *Environment Protection Act 2017*

Project Manager
Stephen Poiesz
Senior Environmental Scientist

Project Assistant
Kirti Thakur
Junior Environmental Scientist

224070_PRSA_V01

EXECUTIVE SUMMARY

Table 1: Summary of PRSA information

Item	Details
Auditor	Mr Philip Mulvey
Auditor account number	EXT001356
Name of person requesting audit or PRSA	Oliver Carroll
Relationship of person requesting audit or PRSA to site	Site Developer
Name of site owner	Nadrasca
Date of auditor engagement	21 November 2024
Completion date of the audit or PRSA	21 February 2025
Reason for audit or PRSA	Environmental Audit Overlay
Elements of the environment assessed	Land and waters (groundwater)
Planning permit number or requirement detail if applicable	
EPA Region	Eastern Metro
Municipality	Whitehorse
Dominant — Lot on plan	Lot 1 PS448313
Additional — Lot on plan(s)	
Site/premises name	
Street/Lot — No.	724-728
Street Name	Whitehorse
Street type (For example, road, court)	Road
Street suffix (For example, North, South)	
Suburb	Mitcham
Postcode	
Site area (in square metres)	6,004
Plan of site/ premises/ location showing the audit site boundary attached	Yes
Expert Support Staff	None
Further work or requirements	None
Nature and extent of continuing risk of harm	-
Outcome of the PRSA report	No Audit required

Table 2: Physical site information

Item	Details
Historical land use	Native bushland, Special Development School from 1962 until 2023
Current land use	Unoccupied school
Proposed land use	Aged Care facility
Current land use zoning	General Residential Zone (GRZ)
Proposed land use zoning	
Surrounding land use – north	Whitehorse Road road reserve
Surrounding land use – south	Low density Residential
Surrounding land use – east	Low density Residential
Surrounding land use – west	Low density Residential
Has EPA been notified about the Site under Section 40 of the Environment Protection Act 2017?	No
Nearest surface water receptor – name	Mullum Mullum Creek
Nearest surface water receptor – direction	660m NE
Site aquifer formation	Andersons Creek Formation
Groundwater segment	A1-A2

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1 INTRODUCTION AND PROJECT UNDERSTANDING

Knowles Group Pty Ltd (the client) engaged Environmental Earth Sciences VIC to undertake a Preliminary Risk Screen Assessment (PRSA) to support a Planning Permit Application for a proposed aged care facility located at 724-728 Whitehorse Road, Mitcham ('the Site').

The following pertinent information was understood when carrying out this investigation:

- The Site area is approximately 6,004 m^2.
- The Site is currently zoned as General Residential Zone (GRZ);
- The Site lies on the eastern side of the intersection between Witt Street and the Whitehorse Road Service Road. More broadly, it is situated the southern side of Whitehorse Road and to the north of the Ringwood rail alignment (see **Figure 1**).
- Plans indicate that a multi-storey residential apartment building is planned for the central area of the site with a single level basement occupying approximately 70% of the entire site area.
- Where a basement is not planned, it is anticipated that the current filling horizon will be removed due to geotechnical reasons; and
- Where a sensitive use is proposed, the Environmental Audit Overlay (EAO) requires a PRSA or environmental audit to be undertaken to satisfy the authority that the Site is suitable for such a use. It is not known why the EAO has been applied to the site, however EES Vic understands that the neighbouring site has been identified as having a potential history of being a motor engineers.

To satisfy the planning authority requirements, a PRSA is proposed to be undertaken by an Environment Protection Authority (EPA) appointed environmental auditor.

EPA Victoria has provided guidance to Auditors on the approach to completion of PRSAs (EPA Victoria, 2023a). PRSAs follow a preliminary site investigation (PSI) process similar to that outlined in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013) (NEPC, 2013). That is, primarily a desktop exercise with option for limited verification sampling if considered necessary, to allow decisions on whether the Site is potentially contaminated, and whether an Audit is required.

A PRSA is not intended to replace an Audit or include extensive sampling to investigate the potential presence of contamination. On that basis, where a site has a potential for contamination (e.g., soil or groundwater contamination that is likely to require remediation), an Audit recommendation could be a likely outcome unless there is evidence of no other contamination at the Site.

This report follows the PRSA process.

This report should be read in conjunction with the limitations detailed in **Section 12** of this report and the appendices contained at the rear of the report.

2 OBJECTIVES

The objective of the PRSA is to assess the potential for contamination to be present at the Site and conclude whether an Audit of the Site will be required to determine if the land is suitable for the proposed aged care development. A PRSA is to be undertaken by an EPA appointed environmental auditor in accordance with the *Environment Protection (EP) Act 2017*.

If an audit is considered required by the Auditor, an outline scope for Audit will be provided as an outcome of the PRSA.

3 REGULATORY FRAMEWORK

The following published guidelines and standards were considered during the PRSA of the site:

Guidelines issued by the Authority under section 203 of the Environment Protection Act 2017

- EPA Victoria (2023). Environmental Auditor Guidelines for Appointment and Conduct. EPA Publication 865.14. December 2023.
- EPA Victoria (2021). Environmental Auditor Guidelines – Provision of Statements and Reports for Environmental Audits and Preliminary Risk Screen Assessments. EPA Publication 2022. August 2021.
- EPA Victoria (2023). Guideline for conducting preliminary risk screen assessments. EPA publication 2021.1. September 2023.

Subordinate Legislation

- Victorian Government Gazette (2021). Environment Reference Standard. S245 Wednesday 26 May 2021.
- Victoria Government (2021). Environment Protection Regulations 2021.

National Environment Protection Measures

- National Environment Protection Council (NEPC) (2021). National Environment Protection (Ambient Air Quality) Measure 1998, as amended May 2021.
- National Environment Protection Council (NEPC) (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013.

Other Published Guidelines and Standards

- Australian & New Zealand Guidelines for Fresh and Marine Water Quality website (https://www.waterquality.gov.au/anz-guidelines).
- Australian Government. National Health and Medical Research Council (2008). Guidelines for Managing Risks in Recreational Waters.
- Australian & New Zealand Environment & Conservation Council and Agriculture & Resource Management Council of Australia and New Zealand (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality. National Water Quality Management Strategy.
- Department of Environment, Land, Water and Planning (July 2021). Potentially Contaminated Land – Planning Practice Note 30.
- Standards Australia (2005). Australian Standard, Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds. AS4482.1 – 2005.
- Standards Australia (1999). Australian Standard, Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances. AS4482.2 – 1999

4 SCOPE OF WORK

The scope of work undertaken comprised the following:

- A review of previous works undertaken.
- A desktop review of the Site to identify potential data gaps.
- A site inspection.
- Development of a conceptual site model (CSM).
- Preparation of a PRSA report*.
- Preparation of a PRSA Statement*.
- Development of an audit scope*, if required.

Submission of the PRSA report and Statement to EPA*.

*Note: * Elements are prescribed by the EP Act 2017, and subordinate legislation.*

5 METHODOLOGY

The methodology to deliver the scope of works will be as follows.

5.1 Desktop Review

- A review of the following documents was undertaken:
    - AGS Environmental Services Pty Ltd (2024), *Preliminary Site Investigation with Soil Sampling, 724-728 Whitehorse Road, Mitcham*, 25 July 2024.
- A desktop review of site history and environmental setting, including review of the historical use of the property, in order to assess potential contaminating activities at or surrounding the site

5.2 Field Program

In order to confirm site conditions, a site inspection by the auditor in accordance with EPA Publication 2021 was undertaken to confirm results obtained by previous investigations and address identified data gaps.

5.3 Reporting

The EP Act 2017 is prescriptive on what is to be included in a PRSA report:

- Assessment of the likelihood of the land being contaminated and, if so, the need for an environmental audit considering the environmental values that apply to the Site. Consideration will be given to the proposed development plans in order to provide context around the potential for risk to future receptors at site.
- The auditor's detailed analysis and review of the PSI and soil sampling report, including a summary of the findings of inspection.
- Identification of the environmental values at the Site.
- Interpretation of the soil analysis results.
- Development of a CSM that identifies possible sources, pathways and receptors at the Site, as well as consideration as to whether they are complete pathways.
- Consideration of the proposed development plans to provide context on the potential for risk to future site receptors.
- An assessment of the likelihood of the land being contaminated and, if so, the need for an environmental audit considering the environmental values that apply to the Site.
- Preparation of a PRSA Statement in accordance with Section 206 of the Act including, if one is recommended, a scope for the Audit.

The PRSA report and Statement will be submitted to EPA within five business days of completion, as per Section 205 of the EP Act 2017.

6 PROPOSED SITE USE

The site is planned to be developed as a two-storey high density residential aged care facility with a single level basement. The basement footprint is planned to cover approximately 70% of the site Environmental Earth Sciences VIC understands that the filling across the entire site will be removed due to geotechnical reasons. The footprint of the new facility is likely to cover approximately 70% of the total site area and be set back from the eastern boundary by 6.2m. The facility will comprise a three storey building with a single level basement car park.

The remaining exposed 30% of the site is anticipated to have hard paving and/or imported soil planter areas or imported topsoils placed on top. Areas of pre-existing filling (15 cm) across the entire site will be removed due to geotechnical reasons.

It is therefore expected that no exposed soils, other than that of imported soils in planter boxes and other ornamental garden beds, will be accessible by future site users.

Plans for the site are presented in **Appendix A** and letter from the developer confirming the topsoil will be removed is presented in **Appendix B**

7 PHYSICAL SITE INFORMATION

7.1 Site location and identification

7.1.1 Site land use

The Site is located at the eastern side of the intersection between Witt Street and Whitehorse Road Service Road between Witt Street and Buxton Road. The Site also sits to the north of the Ringwood railway alignment. The site is bound to the north by the Whitehorse Road service road, to the west by Witt Street and to the south and east by low density residential dwellings.

The site is rectangular in shape and approximately 6,019m^2 in size. The site is currently unoccupied, however buildings and structures associated with its former use as a school are still present.

The Site identification details are summarised in **Table 3** below and the Site locality and layout are presented in **Figure 1**. The current title and lot plan are presented in **Appendix C** with planning property reports are presented in **Appendix D**.

Table 3: Site Identification

Item	Details
Standard Parcel Identifier (SPI)/ Lot & Plan number	Lot 1\PS448313
Area	Approx. 6,019m^2
Current Zoning	General Residential Zone (GRZ))
Planning Overlays	Significant Landscape Overlay (SLO) Environmental Audit Overlay (EAO) Vegetation Protection Overlay (VPO) Development Contributions Plan Overlay (DCPO)
Current land use	Disused school
Proposed land use	Aged care facility
Local Government Authority	Whitehorse

7.1.2 Surrounding land uses

The surrounding land uses to the Site are presented below in **Table 4**. Uses were noted during the Site walkover and validated by the planning property report compiled for the Site.

Table 4: Surrounding land uses

Direction	Description
East	Low density residential dwellings
West	Low density residential dwellings beyond Witt Street
North	Whitehorse Road road reserve.
South	Low density residential dwellings beyond which is the Ringwood railway alignment.

7.2 Regional geology

The Site sits on the Silurian aged Andersons Creek Formation. This unit is typified by having an overlying layer of saprolitic silty clays. Data collected during environmental investigations (AGS 2024) reported brown to tan silty clays with orange mottling. The auditor considers this consistent with this bedrock lithology.

7.3 Soil and acid sulfate soils

The auditor has identified the Site's soil classification as a Sodosol which is largely a function of the siltstone bedrock. The Sodosol's in this area are typified as being yellow to brownish yellow and are usually mottled. This is consistent with the observations made by AGS (2024).

Given that the site is situated on Silurian sediments away from known watercourses, the auditor agrees with the findings of AGS that the site has a low probability for acid sulfate soils.

7.4 Topography and hydrology

The elevation of the land at the Site ranges from approximately 141mAHD in the south up to 145mAHD in the north, as such, natural water run-off is expected to be in a southerly direction towards the Heatherdale ponding basin. Surface water run-off is, however, expected to be intersected by the Belgrave/Lilydale rail cutting prior to reaching the ponding basin.

7.5 Hydrogeology

Groundwater is expected to be located at a depth of between 20 and 40m which the auditor considers to be consistent with the elevated nature of the site. This places the water table within the Silurian aged Andersons Creek sediments.

The auditor has considered the Groundwater Resource Report (DEECA) presented in **Appendix E**, which notes that that the groundwater aquifers at the Site would be Mesozoic and Palaeozoic Bedrock (basement) sedimentary (fractured rock), including sandstone, siltstone, mudstone, and shale. An anticipated depth to groundwater is 20-50m below ground level with a salinity between 501-1,000mg/L.

The regional groundwater flow direction is expected to follow the site topography towards the south; however, it is noted that the Belgrave/Lilydale railway cutting in this direction may influence the local groundwater flow direction.

7.6 Groundwater dependent ecosystems

A review of the Department of Environment, Land, Water and Planning (DELWP) and BOM (2024) Groundwater Dependent Ecosystems (GDE) atlas maps suggests the nearest aquatic and terrestrial GDEs are Mullum Mullum Creek and the Heatherdale ponding basin area.

7.7 Sensitive Receptors

The nearest sensitive receptors to the Site include those listed in **Table 5**.

Table 5: Sensitive Receptors

Receptor	Onsite	Offsite
Human	Site users (future) including residents, visitors (including children) Maintenance workers	Extractive groundwater users hydraulicly downgradient from the Site. No groundwater extractive bores were identified as being potentially downgradient from the Site.
Ecological	The Site is generally covered in buildings and structures with some various hardstand and asphalt areas. The area exhibits healthy grass growth and a central stand of mature eucalyptus trees.	Given the highly urban setting of the site, any precipitation run off is expected to be directed into sealed stormwater drains and directed towards stormwater drains. As such, the auditor does not consider there to be any meso-scaled ecosystems that are likely to be impacted by on-site activities.

8 HISTORICAL REVIEW

The auditor has reviewed pre-existing historical site reports prepared by AGS Environmental Services Pty Ltd (AGS) and has also compiled additional historical data considered relevant to this PRSA.

8.1 Preliminary Site Investigation (PSI) with Soil sampling (AGS Environmental Services 2024)

AGS conducted a Preliminary Site investigation with limited soil sampling in July 2024.

The AGS historical review reported the site to have been used as the Mitcham Special School from 1962 to 2023, and prior to this it was vacant bushland. The site has been unoccupied since 2023. Whilst the historical review is considered to be relatively brief, the main points have been addressed, and given the sparse history of the area, the auditor considers the report generally sufficient to be relied upon for the purposes of this PRSA.

Potential on-site contamination was identified as being associated with uncontrolled imported filling at the site and the use of an incinerator. AGS found no evidence of widespread imported filing at the site nor evidence of the use of any incinerators.

Adjacent to the site to the east at 730 Whitehorse Road, historical evidence indicated the presence of a former mechanics (Mitcham Motors – motor engineers) in the 1950s. Further investigation undertaken by the auditor indicates that re-numbering of properties along Whitehorse Road (Formerly Maroondah Highway) occurred in the late 1950s, and thus the property listed at 730 Maroondah Highway was actually positioned near the Mitcham Road intersection adjacent to the Mitcham Hotel (now 566 Maroondah Highway). This property is now a drive-through bottle shop with all the indications of being a former service station/mechanics such as former workshop entrance and bowser canopy still present. Given the above, the auditor does not believe that Mitcham Motors ever operated out of the adjacent property.

The most recent aerial photograph presented was from 2024, however the auditor is of the opinion that no significant changes have occurred at the site in the meantime that would alter the potential contamination profile of the site. An independent review of these aerial photographs is presented in **Table 6**.

Table 6: Aerial photograph summary

Year	Onsite	Offsite (150m radius)
1945	The sites land use appears to be an undeveloped green space, with a dense vegetation spread.	The majority of the surrounding land use appears to be agricultural, with structures spread sporadically, corelating with the agricultural blocks. Whitehorse Road is present to the north of the site and the railway corridor to the south of the site is present.

Year	Onsite	Offsite (150m radius)
1956	The site appears to still be undeveloped green space, covered by dense tree vegetation. There are no onsite structures.	The residential density of the surrounding area has increased, particularly to the west of the site and to the north beyond Whitehorse Road. There is still a large number of agricultural properties in the vicinity of the site.
1962	The site has been developed, and there is now a large structure encompassing the north-western portion of the site. It appears that a hardstand concrete slab is present across the remainder of the site.	The density of residential properties has continued to increase, and now agricultural blocks are extremely sparse.
1972	The site appears unchanged from the 1962 aerial photograph.	The area is similar to that observed in 1962. The density of residential properties has continued to increase.
1984	The site appears unchanged from the 1972 aerial photograph.	The area is similar to that observed in 1972
2009	The site appears unchanged from the 1984 aerial photograph. The vegetation in the onsite garden beds consists of large established trees.	The surrounding land appears essentially unchanged.
2019	The site appears unchanged from the 2009 aerial photograph.	The surrounding land appears essentially unchanged.
2024	The site appears unchanged from the 2019 aerial photograph.	The surrounding land appears essentially unchanged.

No fuel storage or waste by products being disposed on site were noted during inspection. An incinerator was present at the site for waste disposal practices.

A brief soil sampling program was undertaken which involved the sampling of soils from 10 locations in a rough grid-based array across external areas of the site. The general soil profile reported was that of a 0.1m thick layer of gravels beneath which a stiff, compacted orange clay was encountered.

The laboratory analysis and discussion focussed primarily on potential waste classification of the soils in accordance with EPA 1828.3, likely a function for the proposed basement excavation. Two samples exceeded criteria for Fill Material for arsenic and zinc. In utilising 95% UCL calculations, it was concluded that these soils could be classified as Fill Material.

A review of the results by the auditor found no exceedances of Tier 1 HIL ‘A’ criteria for unrestricted land use.

A copy of this PSI is presented in **Appendix F**.

8.2 EPA Victoria records

8.2.1 Completed audit reports

The area around the Site does not typically have an industrial history, as such, completed environmental audits in the area are relatively sparse. Two environmental audits within 1 km

of the Site: 762-764 Whitehorse Road towards the east of the site and the former Heatherdale Primary School site located 350m to the south.

762-764 Whitehorse Road, Mitcham

The closest EPA audit to the site was at 762-764 Whitehorse Road, Mitcham located approximately 300m east of the site (Maple Auditing Pty Ltd, 2023).

The site history investigation found that the site was originally owned by 'merchants' from the early 1920s and a 'rubber worker' until 1939. In 1953, Penguin Books used it for wholesale bookselling until 1965 when Dunlop Rubber used it for tyre servicing and as a warehouse after which the ownership was transferred to holding company. The site was used as a commercial storage shed since then.

Site investigation works identified filling reporting concentrations of heavy metals and benzo(a)pyrene as exceeding one, or more, of the adopted assessment criteria. A soil remediation program excavated these soils out of the site and the remaining surface successfully validated.

A groundwater assessment was undertaken through the installation of a single groundwater monitoring well. Groundwater was encountered at a depth of approximately 25m below ground level with reported TDS placing groundwater within Segment C of the ERS. No flow direction was calculated; however, it was assumed that groundwater would be flowing northerly given the site topography. Reported concentrations of pH, chloride, sodium, copper and zinc as exceeding one or more of the adopted assessment criteria, however these were deemed to not constitute pollution as the exceedances are representative of natural background concentrations within the aquifer.

It was concluded that in the context of the proposed childcare facility development, where the site is constructed in accordance with the proposed development plans and with the construction, the site is considered suitable for the proposed use and the environmental values of 'Land Dependent Ecosystems and Species', 'Human Health', 'Aesthetics' and 'Production of Food, Flora and Fibre', would not be threatened.

Given the distance and direction of this site, the auditor does not consider it to impact the Site, however as the geology is comparable, it is expected the there are similarities in baseline geochemical characteristics.

Corner Purches and Good Governs Streets, Mitcham

This audit is situated 350m south of the site at the former Heatherdale Primary School. The auditor considers this to be an analogous site given its similar history and environmental setting.

This site operated as a primary school from 1964 until 1994 when the site was divested and redeveloped into low density residential housing. Prior to this the site was agricultural land. Potential contamination was identified at the site due to uncontrolled filling used to raise the sports oval, and the presence of three underground storage tanks for the purposes of storing diesel boiler fuel.

Removal and validation of the USTs (used for heating oil) was undertaken successfully with 76m^3 of contaminated soils removed from site.

Soil sampling from elsewhere at the site did not report the presence of contamination over the adopted assessment criteria.

No groundwater assessment was undertaken as it was considered that the low contaminant concentrations in the site soils suggested a negligible risk of groundwater contamination.

This audit was undertaken in 1994 and under older legislative requirements. The site was awarded a Certificate of Environmental Audit with no conditions and allowing for unrestricted land use.

8.2.2 Priority site register

One EPA priority sites were identified within 2 km of the Site. A search conducted by the auditor on Victoria Unearthed in February 2025 found that there is a current petroleum storage site to the west (447-449 Whitehorse Road Mitcham VIC 3132) that requires assessment and/or clean up. The auditor does not consider this site to have potential to adversely impact the Site.

8.2.3 Waste Management Facilities and Landfills

A search of EPA Vic Landfill registers on 10 February 2025 identified one landfill located approximately 1.3 km north of site. This landfill is closed and is no longer accepting waste. Based on the distance and the elevation contours, the landfill will not pose any risk of contamination.

8.2.4 Groundwater quality restricted use zones (GQRUZ)

A review of EPA Victoria's published list of Groundwater Quality Restricted Use Zones (GQRUZ) on 10 February 2025 by Victoria Unearthed indicated no GQRUZ sites within 1 km of the site.

8.3 Cathodic protections systems

A search of this database conducted by the auditor in February 2025 did not identify the presence of a cathodic protection system at, or within close vicinity of, the Site. A copy of the search is presented in **Appendix G**.

8.4 Site History Summary

Evidence collected by others (AGS2024), and that of the auditor's own investigations, indicates that the site has been used as an educational facility since the early 1960s. Prior to this the site was vacant bushland. Sands and MacDougall directories indicated that a mechanics operated out of the neighbouring property at 730 Whitehorse Road in the 1950s. However, a likely renumbering along Whitehorse Road (formerly Maroondah Highway) occurred in the late 1950s to the present day configuration, and this mechanics was actually situated back near the intersection with Mitcham Road at 566-568 Whitehorse Road. As such, the auditor is of the opinion that a mechanics never operated out of the property that is now known as 730 Whitehorse Road.

It is unclear as to the reasoning behind the EAO that has been emplaced on the site, however there may have been a misunderstanding with respect to the former neighbouring site use, in which case this may have triggered the requirement for a PRSA and/or an environmental audit being that the neighbouring site exhibited a 'high' potential for contamination in line with the Planning Practice Note 30 (PP30).

9 INITIAL DATA GAP ANALYSIS

Based on the previous environmental investigations undertaken at the site that have been reviewed by the auditor, it is considered reasonable to conclude that the Site has been occupied by an educational facility from the early 1960s. Prior to this the site was vacant bushland.

Soil testing has historically been undertaken at the site with concentrations of potential contaminants of concern being within Tier 1 human health criteria. Given this, the auditor does not consider there to be an immediate risk to human health in the current configuration.

After the review of the available documentation, and collection of other historical documentation, the auditor has identified data gaps that are summarised in **Table 7**.

Table 7: Data Gap Analysis

Data Gap	Comment
Uncertainty as to the contamination profile of groundwater beneath the site.	Note during a site inspection topography and likely groundwater flow direction and potential up-gradient sources. Given the low permeability and the amount of time since use and the absence of detection in wells this is not considered a risk

10 FIELD PROGRAM

10.1 Introduction

The auditor conducted a site inspection on 20 January 2025 and considered the sampling works carried out by AGS (2024) as part of the field program for Preliminary Site Investigation (PSI) appropriate to be considered for this PRSA., consistent with the geology and site useage. Thus, no further sampling was done and the results from report submitted by AGS will be used to determine the outcome of this PRSA.

10.2 Site Inspection

A site inspection was conducted on 20 January 2025 by the Environmental Auditor. Photographs were taken by the Auditor and are presented in **Appendix H**.

Observations made during the Site inspection include:

- The site is rectangular in shape with the small northern side facing Whitehorse Road access road and is bounded by Whitt St to the West with residential structures on the side of the street and residences on the eastern and southern boundary.
- Except for a small strip alongside each boundary the site is covered by buildings or pavements.
- Four boreholes (Referring to the bores established by AGS (2024) were inspected and no fill was apparent with buildings and pavements foundered directly on a weathered natural ground. The boreholes had not been backfilled.
- No underground storage tank (UST) vents pipes were seen but access to some sides of buildings was limited. Oil heaters were more a feature of 1950s development than 1960s.
- Pavements are both asphalt and concrete with the eastern half being almost entirely bitumen paving.
- The site slopes gently to the south
- There was no evidence of contaminating activities or apparent in the open bore holes.

11 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) of the Site can be formed by considering the geophysical characteristics of the Site, any contaminant sources, potential receptors and the pathways to the receptors. The CSM, as required by ASC NEPM (2013), is an iterative model constantly being updated during the investigation process as more information becomes available.

11.1 Chemicals of potential concern

The potential sources of contamination were identified based on historical use of site and its surrounding environment. Based on the desktop study, site history and observations made during the inspections the contaminants of primary concern (CoPC) have been summarised in the **Table 8.**

Table 8: Chemicals of Potential Concern

Location	Contamination source- Historical use/ Activity	Potential for contamination	CoPC
On-site	Imported filling	Low	Heavy Metals, TRH, BTEX, PAH, OCPs and ACM

Location	Contamination source- Historical use/ Activity	Potential for contamination	CoPC
	Burning of waste using on site incinerator	Low	Heavy Metals, PAH

The historical use of the site has been primarily that of an educational facility. Any site-sourced contamination at the site is likely from the use of unrestricted imported filling for site levelling purposes. The auditor is aware that soil sampling has previously been undertaken at the site which confirmed the presence of these CoPC albeit at reported concentrations generally below Tier 1 assessment criteria. No imported fill was found during the drilling program, though reworked natural could have occurred.

Movement of contaminated groundwater beneath the site originating from the north is considered to be a potential contamination mechanism, however, no potential sources in this direction were identified. The auditor notes that the proposed basement depth places the bottom of the basement at a depth of 3.8m below ground level. Depth to groundwater is expected to be over 20m, based on information obtained from VVG and from the audit undertaken at 762-764 Whitehorse Road. Groundwater depth, therefore, is expected to be over 14m below the proposed basement depth, well below the likely depth where degassing of volatiles from groundwater would potentially ingress the proposed basement in harmful quantities.

11.2 Potentially Affected Media

The auditor considers that it is likely that shallow soils are the only impacted media resulting from on-site activities i.e. potential source.

The auditor considers there to be a low potential for groundwater and soil vapour to be contaminated as no potential sources have been identified either on-site, or up gradient to the north, however these are not considered to be sourced from on-site activities. Further, use of groundwater for extractive uses is not considered likely given the presence of town reticulated water supply and a potential mechanism in which groundwater use is prohibited.

11.3 Source to Receptor Pathway Analysis

11.3.1 Sources

Sources of potential contamination are considered to be limited to the following:

- Potential though unlikely historical importation of filling on-site. The site appeared to have a cut and fill undertaken on site.

11.3.2 Receptors

The potential human receptors include the future users of the site (residents, construction and maintenance including utilities workers) and visitors;

Potential environmental receptors are flora and fauna that comes into contact with shallow soils and any potential water run-off.

11.3.3 Pathways

The auditor considers the following potential exposure pathways to be relevant for the site:

- Contaminated Soil: Direct dermal contact, ingestion – future site users, construction workers, sub-surface maintenance workers

11.3.4 Source – Pathway – Receptor (SPR) Linkage Assessment

As the majority of reported soil concentrations are below Tier 1 criteria (i.e. no source), they are considered low risk to future site users and the exposure pathway can be considered incomplete.

Reported arsenic and zinc concentrations in filling is of potential concern. Zinc is associated with runoff with zincalum cladding, gutters and site equipment and arsenic is likely to be natural. However, as previously discussed, the developer confirmed that the top 150 mm of soil will be removed from site and disposed of at landfill prior to any developments or earthworks. Therefore, soil contamination in the form of heavy metals (arsenic and zinc specifically) will not pose a risk to future site users.

11.4 Contamination risk

The site is considered to have a **low risk of contamination** due to the following:

- The site history indicates that the site has been occupied by an educational facility for its known history since the 1960s;
- Any contamination associated with the previous site use is likely to be isolated and discrete; and removed during the site development
- Historical records inferring that the neighbouring property at 730 Whitehorse Road was a former mechanics are not relevant given that re-numbering of properties numbers along Whitehorse Road has occurred since; and
- Representative sampling undertaken by an environmental assessor (AGS) did not identify the presence of any CoPC above applicable tier one health-based criteria. Though these levels are consistent with historical uses, topsoil will be removed as part of the development plan.

12 CONCLUSION AND OUTCOME

12.1 Conclusion

Environmental Earth Sciences has completed a Preliminary Risk Screen Assessment (PRSA) at the site located at 724-728 Whitehorse Road, Mitcham.

The desktop study identified the site as being historically occupied by an educational facility since the 1960s.

Evidence suggested that a mechanics operated out of the neighbouring site to the east between 1940 and late 1950s. This has been determined as being erroneous with this mechanic actually operating out of what is now 566-568 Whitehorse Road following re-numbering of the road in the late 1950s.

A subsequent soil sampling program undertake by AGS (2024), did not report soil contamination above the tier 1 human health assessment criteria.

Based on investigations undertaken by Environmental Earth Sciences, including historical investigations, a site inspection and soil sampling, Environmental Earth Sciences concludes the following:

- There is low contamination risk to future onsite or offsite receptors as a result of soil conditions at the site for the proposed development.
- Though the auditor notes that all topsoil is to be removed from site according to IWRG1828.3 to a landfill appropriate for the waste classification.

12.2 PRSA outcome

On the basis of the information presented within this report, the outcome of the PRSA, as per EPA (2023a) is:

Outcome A – Unlikely that contaminated land is present (as per the definition in section 35(1) of the *EP Act 2017*), and no environmental audit is required.

13 LIMITATIONS

This report has been prepared by Environmental Earth Sciences VIC ACN 109 404 024 in response to and subject to the following limitations:

1. This report comprises the formal report, documentation sections, tables, figures and appendices as referred to in the index to this report and must not be released to any third party or copied in part without all the material included in this report for any reason;
2. The report only relates to the Site referred to in the scope of works being located at 724-728 Whitehorse Road, Mitcham (“the Site”);

3. The report relates to the Site as at the date of the report as conditions may change thereafter due to natural processes and/or site activities;

4. Fill, soil, groundwater and rock to the depth tested on the Site may be fit for the use specified in this report. Unless it is expressly stated in this report, the fill, soil and/or rock may not be suitable for classification as clean fill if deposited off site;

5. This report is not a geotechnical report.

14 REFERENCES

AGS (2024), *Preliminary Site Investigation with Soil Sampling, 724-728 Whitehorse Road, Mitcham*, *AGS240210-R01,* 25 July 2024.

Australian and New Zealand Governments (ANZG) (2018) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Available at www.waterquality.gov.au/anz-guidelines.

Bureau of Meteorology (BOM) (2024) *Groundwater Dependent Ecosystems Atlas*, available at: http://www.bom.gov.au/water/groundwater/gde/index.shtml

CSIRO (2023) *Australian Soil Resource Information System (ASRIS)*

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Maple Auditing Pty Ltd (2023), *Environmental Audit Report, 762-764 Whitehorse Road, Mitcham*, 25 August 2023;

National Environment Protection Council (NEPC) (2013) *National Environment Protection (Assessment of Site Contamination) Amendment Measure (NEPM),* Adelaide, SA.

Sinclair Knight Merz (1994), *Environmental Audit Report, Former Heatherdale Primary School Site, Mitcham,* 21 October 1994;

Victorian Government (2021) *Environment Reference Standard* (ERS). No S 245.

Victoria Unearthed (2024) available at: Victoria Unearthed

FIGURES

Legend

Site Boundary

0 10 m 20 m

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ENVIRONMENTAL EARTH SCIENCES

Produced by **Datanest.earth**

Title: Site Plan		
Client: Knowles Group		Size: A4
Project: Mitcham PRSA-	Drawn: Kirti Thakur	Figure No.: 1
Date: 10-02-2025	Checked: Stephen Poiesz	
Proj No: 224070	Scale: 1:928	Version: draft

APPENDIX A: PROPOSED SITE PLANS

EXISTING TREE ON SITE TPZ ENCROACHMENT AREA

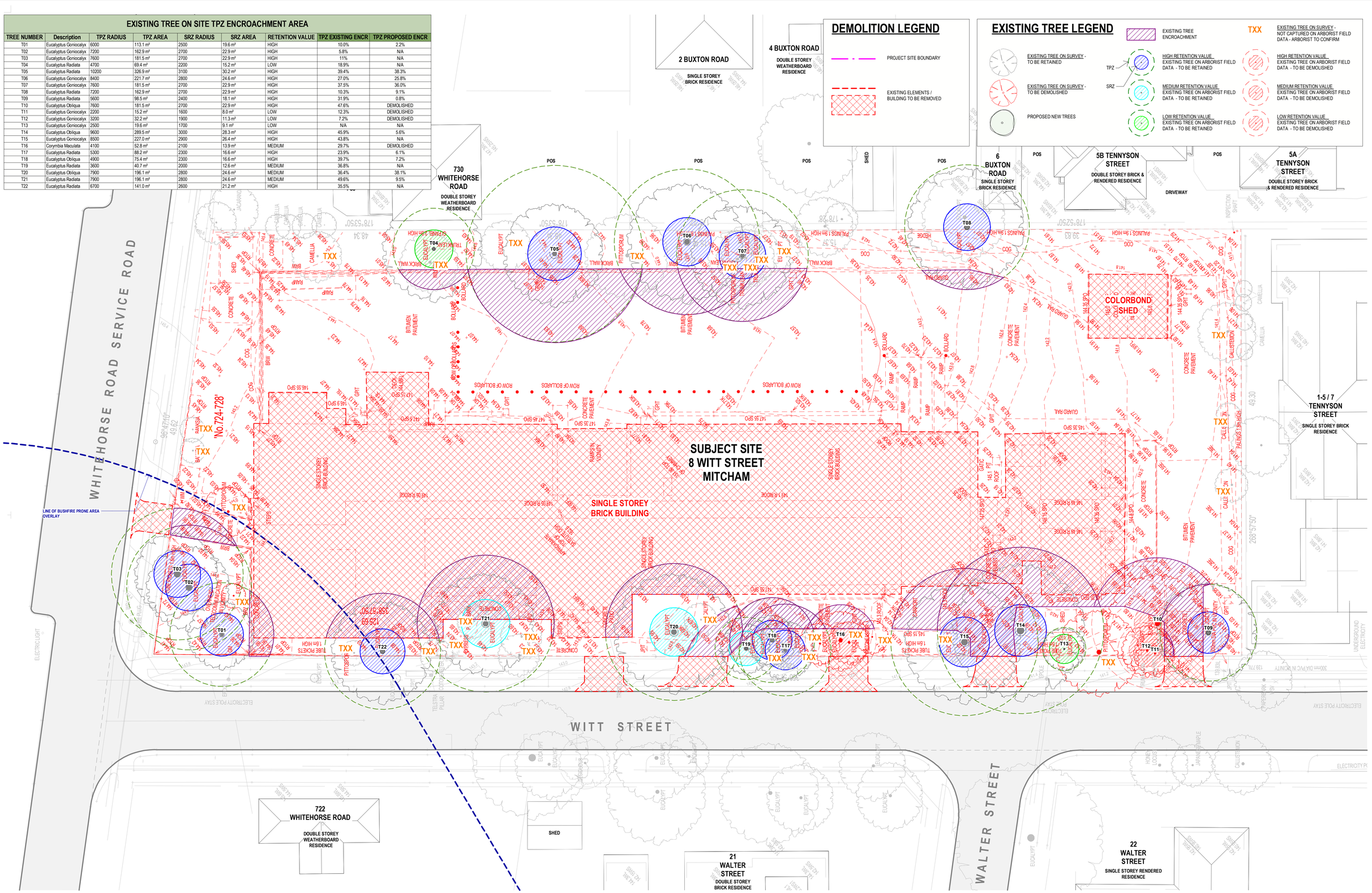
TREE NUMBER	Description	TPZ RADIUS	TPZ AREA	SRZ RADIUS	SRZ AREA	RETENTION VALUE	TPZ EXISTING ENCR	TPZ PROPOSED ENCR
T01	Eucalyptus Goniocalyx	6000	113.1 m²	2500	19.6 m²	HIGH	10.0%	2.2%
T02	Eucalyptus Goniocalyx	7200	162.9 m²	2700	22.9 m²	HIGH	5.8%	N/A
T03	Eucalyptus Goniocalyx	7600	181.5 m²	2700	22.9 m²	HIGH	11%	N/A
T04	Eucalyptus Radiata	4700	69.4 m²	2200	15.2 m²	LOW	18.9%	N/A
T05	Eucalyptus Radiata	10200	326.9 m²	3100	30.2 m²	HIGH	39.4%	38.3%
T06	Eucalyptus Goniocalyx	8400	221.7 m²	2800	24.6 m²	HIGH	27.0%	25.8%
T07	Eucalyptus Goniocalyx	7600	181.5 m²	2700	22.9 m²	HIGH	37.5%	36.0%
T08	Eucalyptus Radiata	7200	162.9 m²	2700	22.9 m²	HIGH	10.3%	9.1%
T09	Eucalyptus Radiata	5600	98.5 m²	2400	18.1 m²	HIGH	31.9%	0.8%
T10	Eucalyptus Obliqua	7600	181.5 m²	2700	22.9 m²	HIGH	47.6%	DEMOLISHED
T11	Eucalyptus Goniocalyx	2200	15.2 m²	1600	8.0 m²	LOW	12.3%	DEMOLISHED
T12	Eucalyptus Goniocalyx	3200	32.2 m²	1900	11.3 m²	LOW	7.2%	DEMOLISHED
T13	Eucalyptus Goniocalyx	2500	19.6 m²	1700	9.1 m²	LOW	N/A	N/A
T14	Eucalyptus Obliqua	9600	289.5 m²	3000	28.3 m²	HIGH	45.9%	5.6%
T15	Eucalyptus Goniocalyx	8500	227.0 m²	2900	26.4 m²	HIGH	43.8%	N/A
T16	Corymbia Maculata	4100	52.8 m²	2100	13.9 m²	MEDIUM	29.7%	DEMOLISHED
T17	Eucalyptus Radiata	5300	88.2 m²	2300	16.6 m²	HIGH	23.9%	6.1%
T18	Eucalyptus Obliqua	4900	75.4 m²	2300	16.6 m²	HIGH	39.7%	7.2%
T19	Eucalyptus Radiata	3600	40.7 m²	2000	12.6 m²	MEDIUM	36.8%	N/A
T20	Eucalyptus Obliqua	7900	196.1 m²	2800	24.6 m²	MEDIUM	36.4%	38.1%
T21	Eucalyptus Radiata	7900	196.1 m²	2800	24.6 m²	MEDIUM	49.6%	9.5%
T22	Eucalyptus Radiata	6700	141.0 m²	2600	21.2 m²	HIGH	35.5%	N/A

DEMOLITION LEGEND

- PROJECT SITE BOUNDARY
- EXISTING ELEMENTS / BUILDING TO BE REMOVED

EXISTING TREE LEGEND

- EXISTING TREE ENCROACHMENT
- EXISTING TREE ON SURVEY - TO BE RETAINED
- EXISTING TREE ON SURVEY - TO BE DEMOLISHED
- PROPOSED NEW TREES
- TXX — EXISTING TREE ON SURVEY - NOT CAPTURED ON ARBORIST FIELD DATA - ARBORIST TO CONFIRM
- TPZ / SRZ
- HIGH RETENTION VALUE EXISTING TREE ON ARBORIST FIELD DATA - TO BE RETAINED
- HIGH RETENTION VALUE EXISTING TREE ON ARBORIST FIELD DATA - TO BE DEMOLISHED
- MEDIUM RETENTION VALUE EXISTING TREE ON ARBORIST FIELD DATA - TO BE RETAINED
- MEDIUM RETENTION VALUE EXISTING TREE ON ARBORIST FIELD DATA - TO BE DEMOLISHED
- LOW RETENTION VALUE EXISTING TREE ON ARBORIST FIELD DATA - TO BE RETAINED
- LOW RETENTION VALUE EXISTING TREE ON ARBORIST FIELD DATA - TO BE DEMOLISHED



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PROJECT REF C:\Users\STanghe\Documents\2410022 - ARCARE - 8 WITT STREET, MITCHAM_STanghe.rvt
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KEY PLAN

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1 : 200	ST	MZ	2410022	SK00-001	B

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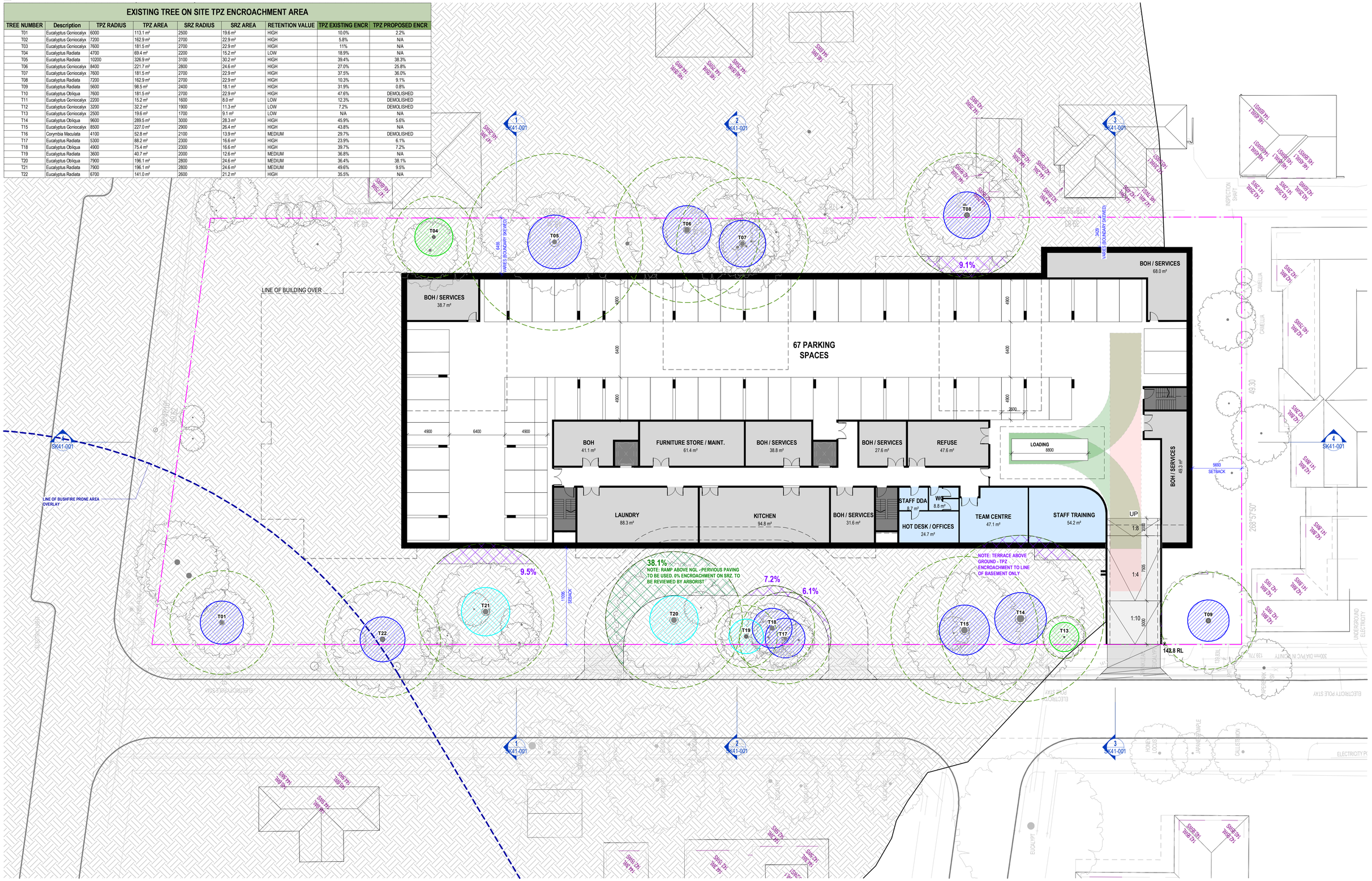

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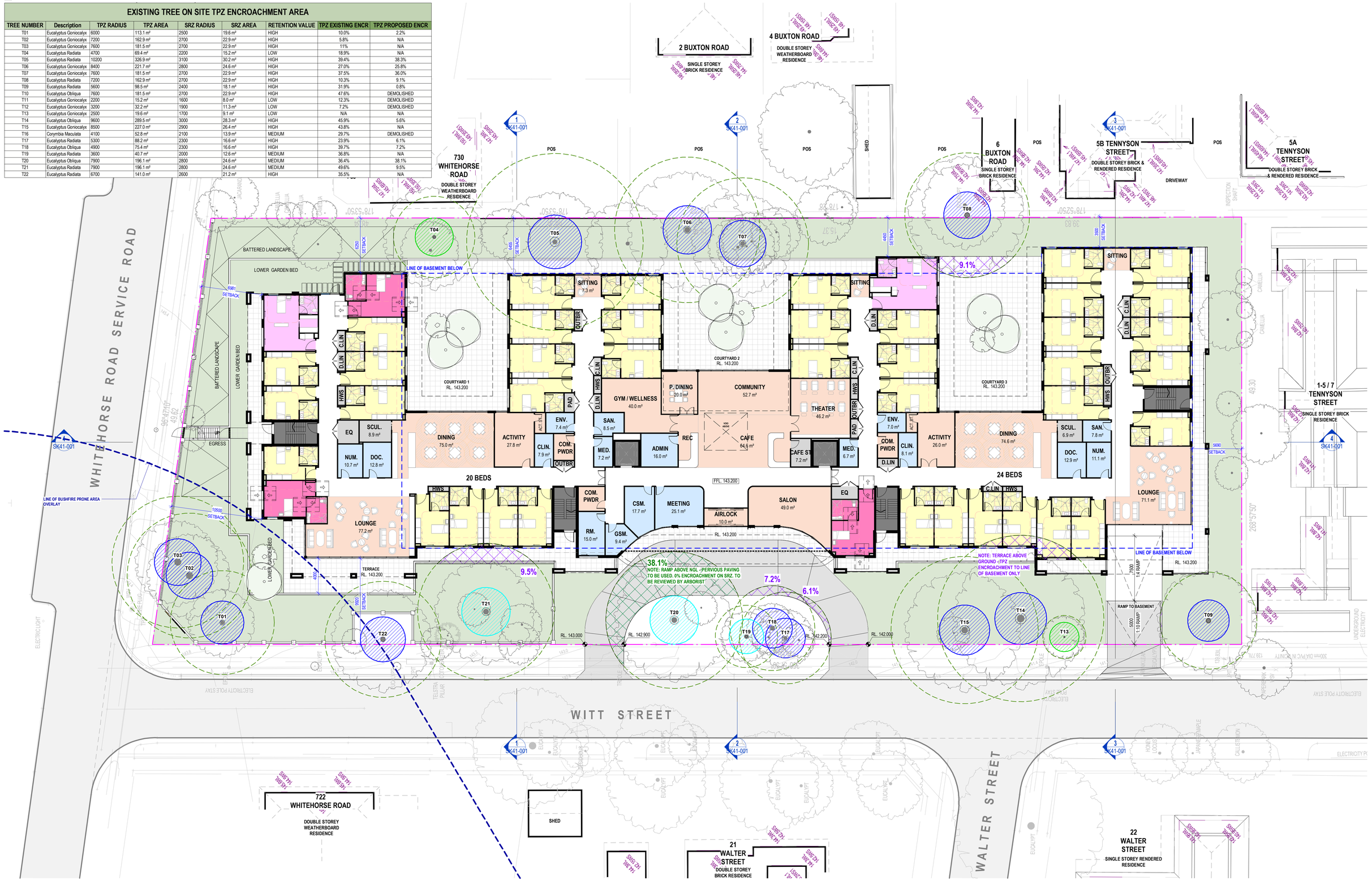
DRAWING TITLE
BASEMENT PLAN

SCALE (@A1)	DRAWN BY	CHECKED BY	PROJECT No.	DRAWING No.	REV
1 : 200	ST	MZ	2410022	SK10-000	B

EXISTING TREE ON SITE TPZ ENCROACHMENT AREA

TREE NUMBER	Description	TPZ RADIUS	TPZ AREA	SRZ RADIUS	SRZ AREA	RETENTION VALUE	TPZ EXISTING ENCR	TPZ PROPOSED ENCR
T01	Eucalyptus Goniocalyx	6000	113.1 m²	2500	19.6 m²	HIGH	10.0%	2.2%
T02	Eucalyptus Goniocalyx	7200	162.9 m²	2700	22.9 m²	HIGH	5.8%	N/A
T03	Eucalyptus Goniocalyx	7600	181.5 m²	2700	22.9 m²	HIGH	11%	N/A
T04	Eucalyptus Radiata	4700	69.4 m²	2200	15.2 m²	LOW	18.9%	N/A
T05	Eucalyptus Radiata	10200	326.9 m²	3100	30.2 m²	HIGH	39.4%	38.3%
T06	Eucalyptus Goniocalyx	8400	221.7 m²	2800	24.6 m²	HIGH	27.0%	25.8%
T07	Eucalyptus Goniocalyx	7600	181.5 m²	2700	22.9 m²	HIGH	37.5%	36.0%
T08	Eucalyptus Radiata	7200	162.9 m²	2700	22.9 m²	HIGH	10.3%	9.1%
T09	Eucalyptus Radiata	5600	98.5 m²	2400	18.1 m²	HIGH	31.9%	0.8%
T10	Eucalyptus Obliqua	7600	181.5 m²	2700	22.9 m²	HIGH	47.6%	DEMOLISHED
T11	Eucalyptus Goniocalyx	2200	15.2 m²	1600	8.0 m²	LOW	12.3%	DEMOLISHED
T12	Eucalyptus Goniocalyx	3200	32.2 m²	1900	11.3 m²	LOW	7.2%	DEMOLISHED
T13	Eucalyptus Goniocalyx	2500	19.6 m²	1700	9.1 m²	LOW	N/A	N/A
T14	Eucalyptus Obliqua	9600	289.5 m²	3000	28.3 m²	HIGH	45.9%	5.6%
T15	Eucalyptus Goniocalyx	8500	227.0 m²	2900	26.4 m²	HIGH	43.8%	N/A
T16	Corymbia Maculata	4100	52.8 m²	2100	13.9 m²	MEDIUM	29.7%	DEMOLISHED
T17	Eucalyptus Radiata	5300	88.2 m²	2300	16.6 m²	HIGH	23.9%	6.1%
T18	Eucalyptus Obliqua	4900	75.4 m²	2300	16.6 m²	HIGH	39.7%	7.2%
T19	Eucalyptus Radiata	3600	40.7 m²	2000	12.6 m²	MEDIUM	36.8%	N/A
T20	Eucalyptus Obliqua	7900	196.1 m²	2800	24.6 m²	MEDIUM	36.4%	38.1%
T21	Eucalyptus Radiata	7900	196.1 m²	2800	24.6 m²	MEDIUM	49.6%	9.5%
T22	Eucalyptus Radiata	6700	141.0 m²	2600	21.2 m²	HIGH	35.5%	N/A



STATUS **DRAFT**

REV	DESCRIPTION	DATE	BY
A	CONCEPT PACK ISSUE	20.12.2024	MZ
B	FOR CLIENT REVIEW	22.01.2025	TM

KEY PLAN

NORTH POINT

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING ANY WORK OR MAKING OF ANY SHOP DRAWINGS. FIGURED DIMENSIONS MUST BE USED IN PREFERENCE TO SCALING. SCALED DIMENSIONS MUST BE VERIFIED ON SITE. SHEET TO BE PRINTED IN COLOUR. THIS DRAWING IS COPYRIGHT AND REMAINS THE PROPERTY OF THE ARCHITECT.

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ADDRESS 8 WITT STREET, MITCHAM
CLIENT ARCARE
DRAWING TITLE GROUND FLOOR PLAN

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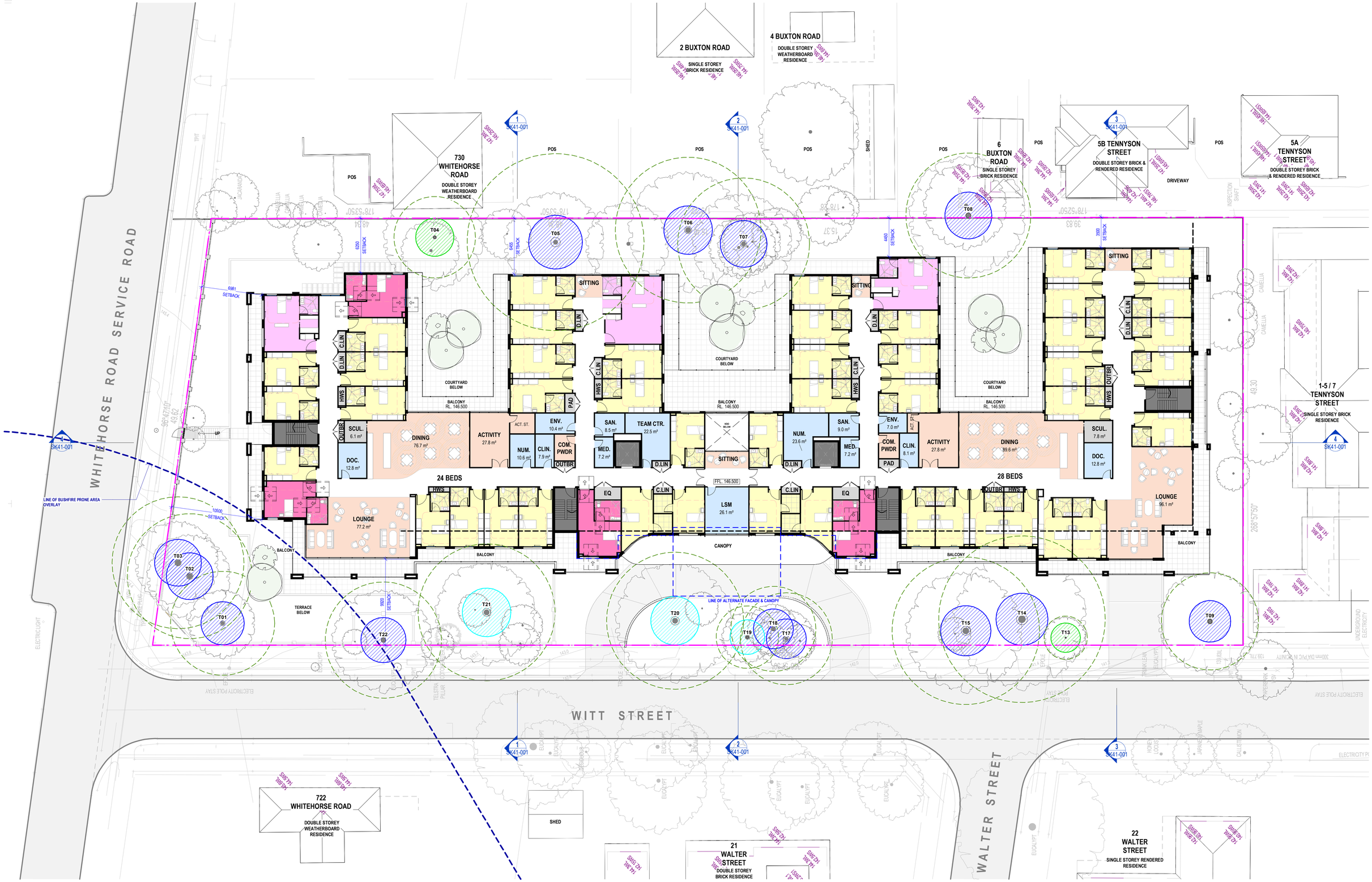
WHITEHORSE ROAD SERVICE ROAD
2 BUXTON ROAD
SINGLE STOREY BRICK RESIDENCE
4 BUXTON ROAD
DOUBLE STOREY WEATHERBOARD RESIDENCE
730 WHITEHORSE ROAD
DOUBLE STOREY WEATHERBOARD RESIDENCE
6 BUXTON ROAD
SINGLE STOREY BRICK RESIDENCE
5B TENNYSON STREET
DOUBLE STOREY BRICK & RENDERED RESIDENCE
5A TENNYSON STREET
DOUBLE STOREY BRICK & RENDERED RESIDENCE
1-5 / 7 TENNYSON STREET
SINGLE STOREY BRICK RESIDENCE
722 WHITEHORSE ROAD
DOUBLE STOREY WEATHERBOARD RESIDENCE
21 WALTER STREET
DOUBLE STOREY BRICK RESIDENCE
22 WALTER STREET
SINGLE STOREY RENDERED RESIDENCE
WITT STREET
WALTER STREET
CAMELLIA
POS
DRIVEWAY
SHED
INSPECTION SHAFT
ELECTRICITY POLE STAY
UNDERGROUND ELECTRICITY
TELSTRA PILLAR
LINE OF BUSHFIRE PRONE AREA OVERLAY
LINE OF ALTERNATE FACADE & CANOPY
SETBACK
COURTYARD BELOW
BALCONY
TERRACE BELOW
CANOPY
SITTING
D.LIN
C.LIN
HWS
OUTBR
SCUL. 6.1 m²
DOC. 12.8 m²
DINING 76.7 m²
ACTIVITY 27.8 m²
ACT. ST.
ENV. 10.4 m²
NUM. 10.6 m²
CLIN. 7.9 m²
COM. PWDR
PAD
SAN. 8.5 m²
TEAM CTR. 22.5 m²
MED. 7.2 m²
NUM. 23.6 m²
SAN. 9.0 m²
ENV. 7.0 m²
CLIN. 8.1 m²
DINING 89.6 m²
SCUL. 7.8 m²
24 BEDS
28 BEDS
LOUNGE 77.2 m²
LOUNGE 96.1 m²
EQ
LSM 26.1 m²
FFL 146.500
BALCONY RL. 146.500
KIT BELOW
T01
T02
T03
T04
T05
T06
T07
T08
T09
T13
T14
T15
T16
T17
T18
T19
T20
T21
T22
6250
6250
6250

WHITEHORSE ROAD SERVICE ROAD

WITT STREET

WALTER STREET

2 BUXTON ROAD
SINGLE STOREY BRICK RESIDENCE

4 BUXTON ROAD
DOUBLE STOREY WEATHERBOARD RESIDENCE

730 WHITEHORSE ROAD
DOUBLE STOREY WEATHERBOARD RESIDENCE

6 BUXTON ROAD
SINGLE STOREY BRICK RESIDENCE

5B TENNYSON STREET
DOUBLE STOREY BRICK & RENDERED RESIDENCE

5A TENNYSON STREET
DOUBLE STOREY BRICK & RENDERED RESIDENCE

1-5 / 7 TENNYSON STREET
SINGLE STOREY BRICK RESIDENCE

722 WHITEHORSE ROAD
DOUBLE STOREY WEATHERBOARD RESIDENCE

21 WALTER STREET
DOUBLE STOREY BRICK RESIDENCE

22 WALTER STREET
SINGLE STOREY RENDERED RESIDENCE

POS
SHED
DRIVEWAY
TERRACE
ROOF BELOW
ROOF OUTLINE ABOVE
BALCONY RL. 149.800
SITTING
C.LIN
HWS
D.LIN
OUTBR
EQ
SCUL. 7.4 m²
MED. 7.2 m²
DINING 102.7 m²
ACTIVITY 30.4 m²
CLIN. 6.7 m²
SAN. 13.2 m²
COM. PWDR
ENV. 12.5 m²
NUM. 10.2 m²
DOC. 15.3 m²
34 BEDS
FFL 149.800
LOUNGE 79.0 m²
22790 SETBACK
2900 SETBACK
2100
T01 T02 T03 T04 T05 T06 T07 T08 T09 T13 T14 T15 T17 T18 T19 T20 T21 T22
1 SK41-001
2 SK41-001
3 SK41-001
4 SK41-001
LINE OF BUSHFIRE PRONE AREA OVERLAY

STATUS **DRAFT**

KEY PLAN

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A	CONCEPT PACK ISSUE	20.12.2024	MZ
B	FOR CLIENT REVIEW	22.01.2025	TM

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ADDRESS 8 WITT STREET, MITCHAM
CLIENT ARCARE
DRAWING TITLE LEVEL 02 FLOOR PLAN

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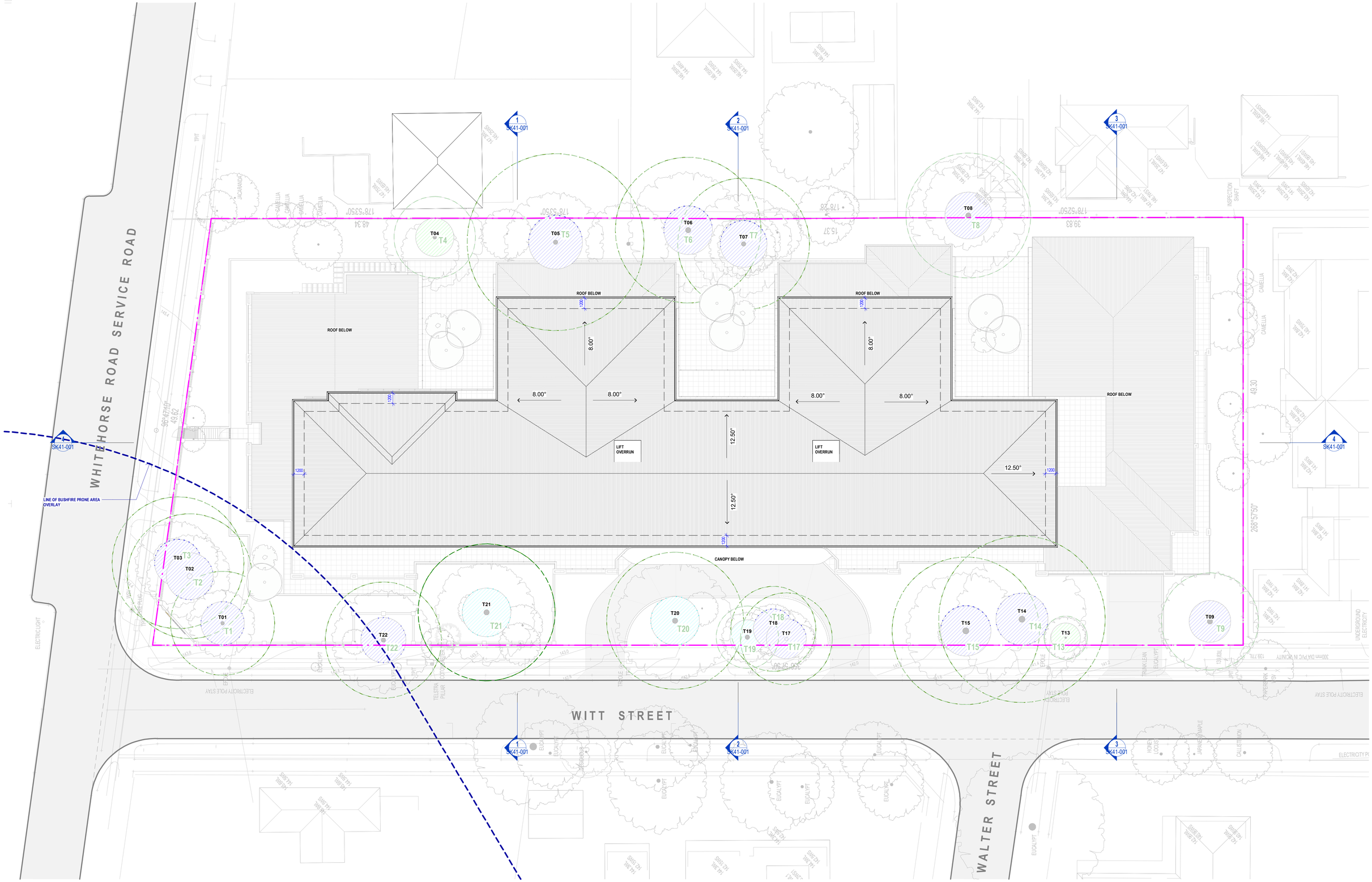

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KEY PLAN

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PROJECT
ARCARE - MITCHAM

ADDRESS
8 WITT STREET, MITCHAM

CLIENT
ARCARE

DRAWING TITLE
ROOF PLAN

SCALE (@A1)	DRAWN BY	CHECKED BY	PROJECT No.	DRAWING No.	REV
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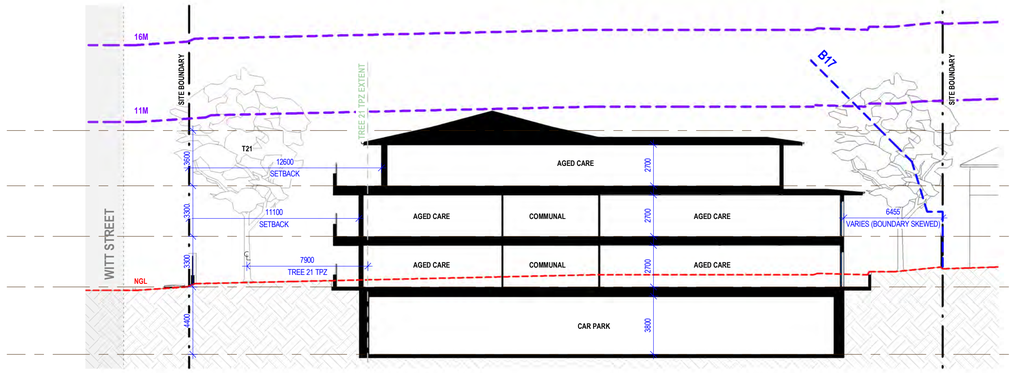

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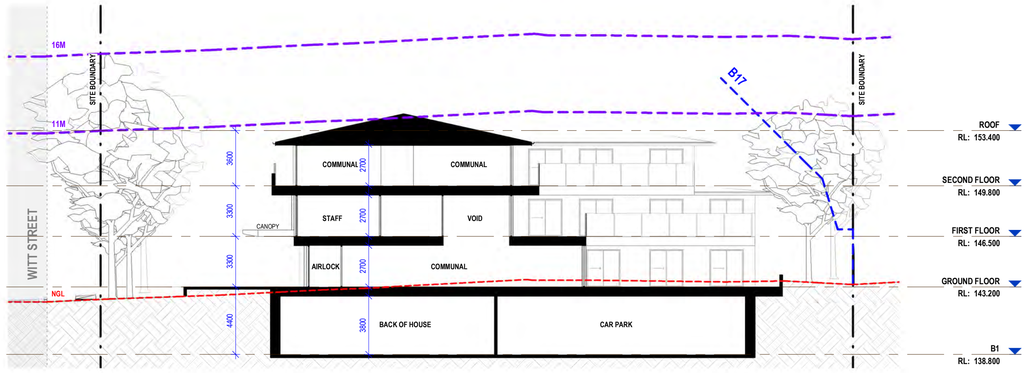

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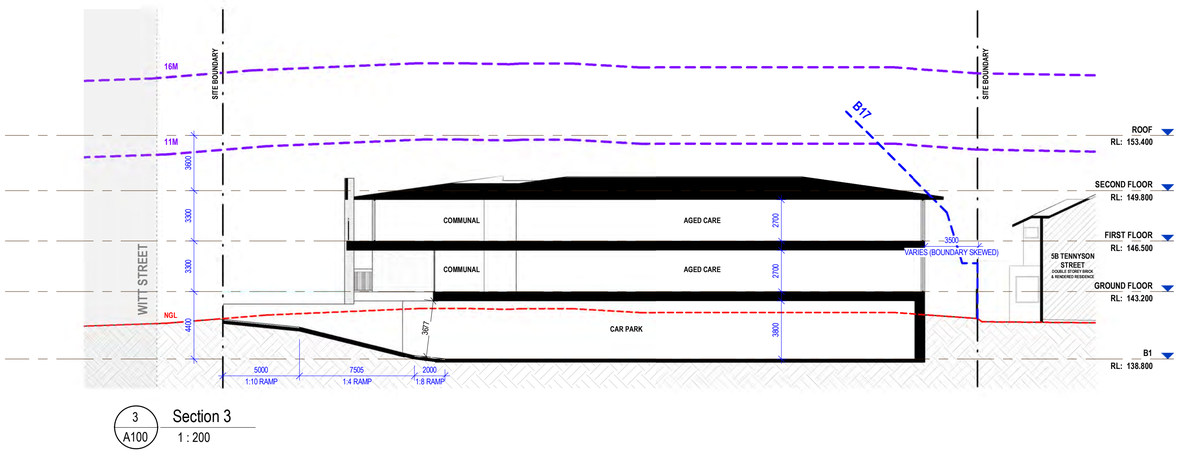
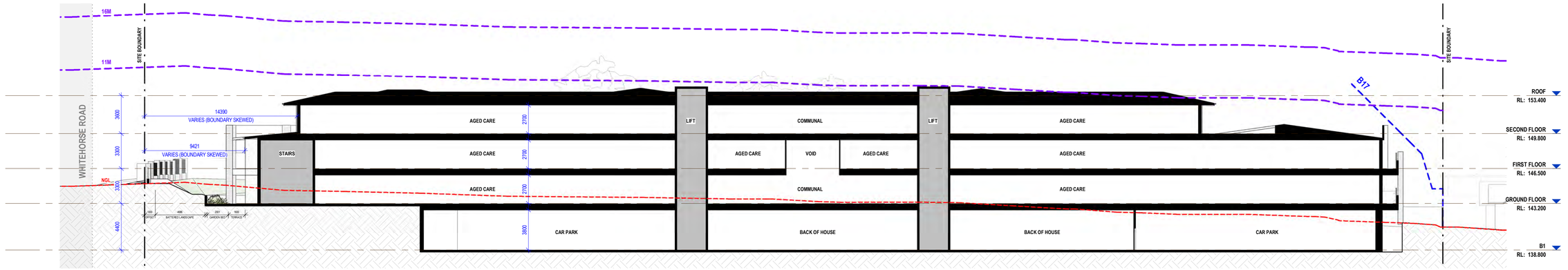


3 / A100 Section 3
1 : 200



4 / A100 Section 4
1 : 200

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Quality ISO 9001 Bureau Veritas
Health & Safety AS 4801 Bureau Veritas

PROJECT
ARCARE - MITCHAM

ADDRESS
8 WITT STREET, MITCHAM

CLIENT
ARCARE

DRAWING TITLE
SECTIONS

SCALE (@A1)	DRAWN BY	CHECKED BY	PROJECT No.	DRAWING No.	REV
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APPENDIX B: LETTER FROM DEVELOPER

KNOWLES GROUP

3/02/2025

To whom it may concern,

RE: 724 – 728 Whitehorse Road, Mitcham Topsoil Condition

As the appointed Senior Development Manager of the land known as 724 – 728 Whitehorse Road, Mitcham 3132, Victoria.

We can confirm that all existing topsoil to a depth of approximately 150mm is to be removed for geotechnical purposes where possible (other than within structural root zones or restricted tree protection zones of existing significant trees). This topsoil is to stripped and disposed to landfill.

Warm Regards,

Oliver Carroll
Senior Development Manager

oliver.carroll@knowlesgroup.com.au

J&G Knowles and Associates Pty Ltd ABN 22 289 962 342
Address 346 South Road, Hampton East Vic 3188
Postal Address PO Box 2250, Moorabbin VIC 3189
Telephone (03) 9559 9600 **Facsmile** (03) 9559 9650
Email reception@knowlesgroup.com.au

APPENDIX C: TITLE AND LOT PLAN

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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 11028 FOLIO 290

Security no : 124122230045J
Produced 21/02/2025 09:51 AM

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 448313E.
PARENT TITLE Volume 10759 Folio 300
Created by instrument AF315779H 04/09/2007

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NADRASCA of 52-62 ROOKS ROAD NUNAWADING VIC 3131
AF315779H 04/09/2007

ENCUMBRANCES, CAVEATS AND NOTICES

CAVEAT AY319893X 19/08/2024
Caveator
ARCARE PTY LTD ACN: 005259361
Grounds of Claim
AGREEMENT WITH THE FOLLOWING PARTIES AND DATE.
Parties
THE REGISTERED PROPRIETOR(S)
Date
19/08/2024
Estate or Interest
FREEHOLD ESTATE
Prohibition
ABSOLUTELY
Lodged by
KRISTINA FIONA MCGEEHAN-HALL
Notices to
KRISTINA MCGEEHAN-HALL of 346 SOUTH ROAD HAMPTON EAST VIC 3189

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS448313E FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: 724-728 WHITEHORSE ROAD MITCHAM VIC 3132

DOCUMENT END

Imaged Document Cover Sheet

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Document Type	**Plan**
Document Identification	**PS448313E**
Number of Pages (excluding this cover sheet)	**1**
Document Assembled	**21/02/2025 09:51**

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PLAN OF SUBDIVISION

STAGE No.	LTO USE ONLY	PLAN NUMBER
	EDITION 1	PS 448313E

LOCATION OF LAND

PARISH: NUNAWADING
TOWNSHIP: ———
SECTION: ———
CROWN ALLOTMENT: ———
CROWN PORTION: 130 (PART)

LTO BASE RECORD: SDMB URBAN
TITLE REFERENCES: Vol.10481 Fol.758
VOL FOL
LAST PLAN REFERENCE: AP 113978

POSTAL ADDRESS: 724 MAROONDAH HWY MITCHAM 3132

AMG Co-ordinates
(of approx. centre of plan) N 5812 700 ZONE: 55 E 342 260

VESTING OF ROADS OR RESERVES

IDENTIFIER	COUNCIL/BODY/PERSON

COUNCIL CERTIFICATION AND ENDORSEMENT

COUNCIL NAME: WHITEHORSE REF: 2920

1. This plan is certified under section 6 of the Subdivision Act 1988
2. ~~This plan is certified under section 11(7) of the Subdivision Act 1988.~~
   ~~Date of original certification under section 6~~ . . / . . . / . . . .
3. ~~This is a statement of compliance issued under section 21 of the Subdivision Act 1988.~~

OPEN SPACE
(i) A requirement for public open space under section 18 of the Subdivision Act 1988 ~~has~~/has not been made.
(ii) ~~The requirement has been satisfied.~~
(iii) ~~The requirement is to be satisfied in Stage~~ . . . . . .

Council Delegate
~~Council Seal~~
Date 22 / 11 / 02

~~Re-certified under section 11(7) of the Subdivision Act 1988.~~
~~Council Delegate~~
~~Council Seal~~
~~Date~~ / /

LTO USE ONLY
STATEMENT OF COMPLIANCE/ EXEMPTION STATEMENT
RECEIVED ☑
DATE: 13/10/03

LTO USE ONLY
PLAN REGISTERED
TIME 4.08
DATE 23.10.03
Assistant Registrar of Titles

NOTATIONS

DEPTH LIMITATION: NIL

STAGING:
This ~~is~~/is not a staged subdivision.

Planning Permit No.

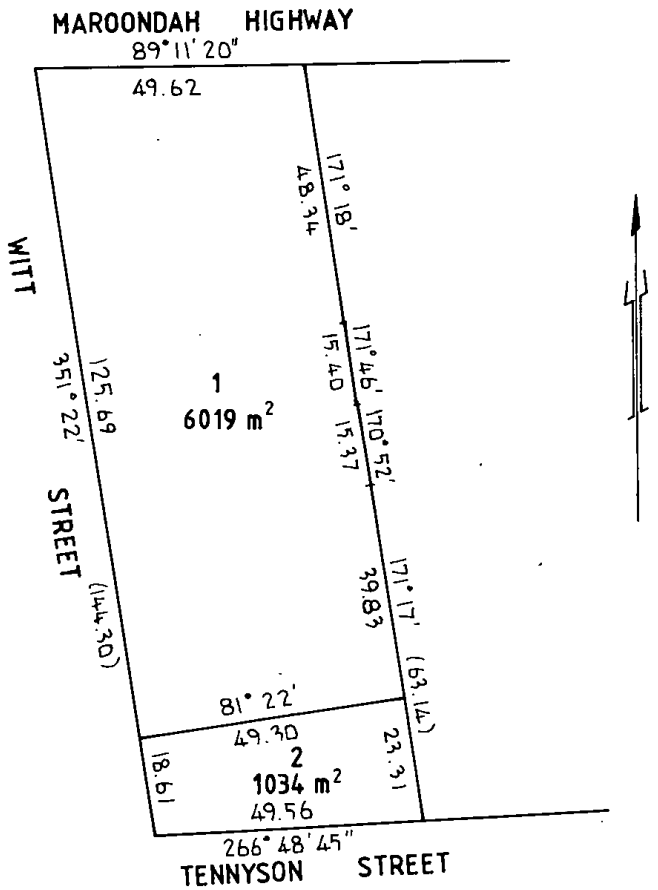
SURVEY:
This plan ~~is~~/is not based on survey.

EASEMENT INFORMATION

LEGEND A – Appurtenant Easement E – Encumbering Easement R – Encumbering Easement (Road)

SECTION 12(2) OF THE SUBDIVISION ACT 1988 APPLIES TO ALL THE LAND IN THIS PLAN.

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefitted/In Favour Of



Sheet 1 of 1 Sheet

SCALE
10 0 25 50
LENGTHS ARE IN METRES

ORIGINAL
SCALE 1:1000
SHEET SIZE A3

LICENSED SURVEYOR (PRINT) TERENCE SHACKLOCK
SIGNATURE . . . . . DATE 29/8/2001
REF 504A VERSION 2

. . . . . .
DATE / /
COUNCIL DELEGATE SIGNATURE

Creffields PS07

APPENDIX D: PROPERTY REPORT

PLANNING PROPERTY REPORT

Department of Transport and Planning

From www.planning.vic.gov.au at 10 February 2025 10:22 AM

PROPERTY DETAILS

Address:	**724-728 WHITEHORSE ROAD MITCHAM 3132**
Lot and Plan Number:	**Lot 1 PS448313**
Standard Parcel Identifier (SPI):	**1\PS448313**
Local Government Area (Council):	**WHITEHORSE** www.whitehorse.vic.gov.au
Council Property Number:	**254057**
Planning Scheme:	**Whitehorse** Planning Scheme - Whitehorse
Directory Reference:	**Melway 49 C9**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Melbourne Water Retailer:	**Yarra Valley Water**
Melbourne Water:	**Inside drainage boundary**
Power Distributor:	**UNITED ENERGY**

STATE ELECTORATES

Legislative Council:	**NORTH-EASTERN METROPOLITAN**
Legislative Assembly:	**RINGWOOD**

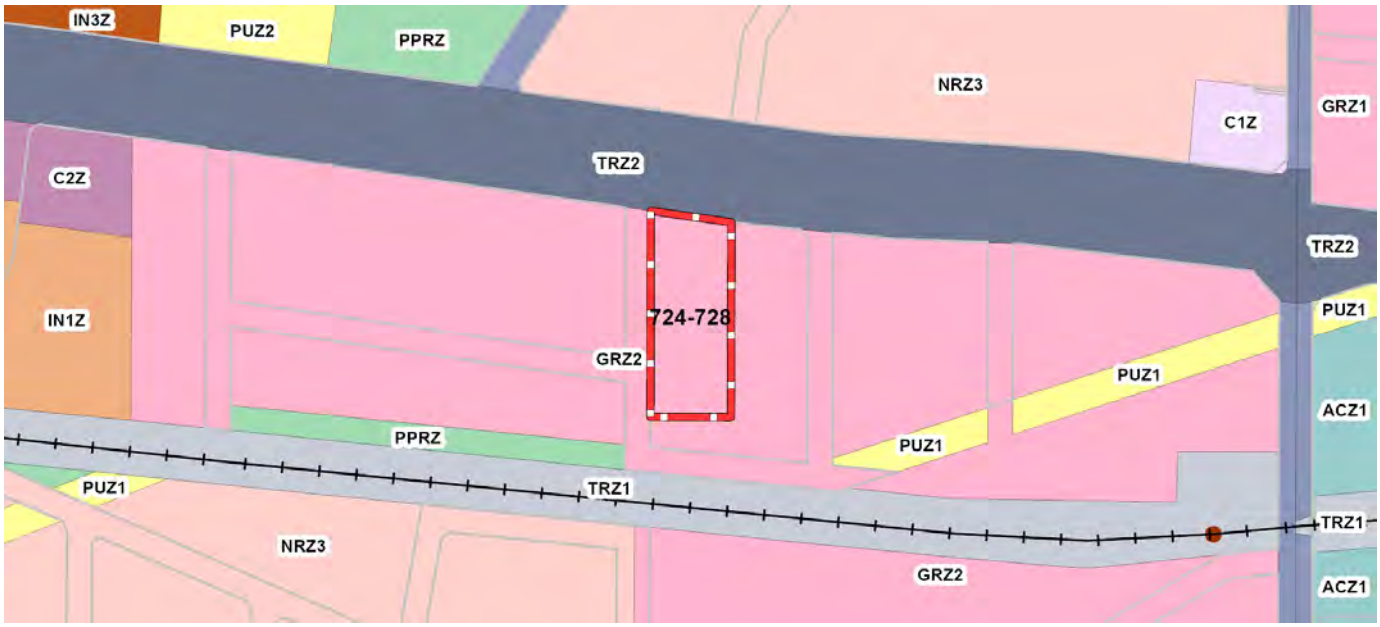
OTHER

Registered Aboriginal Party: **Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation**

View location in VicPlan

Planning Zones

GENERAL RESIDENTIAL ZONE (GRZ) (WHITEHORSE)
GENERAL RESIDENTIAL ZONE - SCHEDULE 2 (GRZ2) (WHITEHORSE)



0 150 m

- ACZ - Activity Centre
- C1Z - Commercial 1
- C2Z - Commercial 2
- GRZ - General Residential
- IN1Z - Industrial 1
- IN3Z - Industrial 3
- NRZ - Neighbourhood Residential
- PPRZ - Public Park and Recreation
- PUZ1 - Public Use-Service and Utility
- PUZ2 - Public Use-Education
- TRZ1 - State Transport Infrastructure
- TRZ2 - Principal Road Network
- TRZ3 - Significant Municipal Road
- Railway line
- Railway station

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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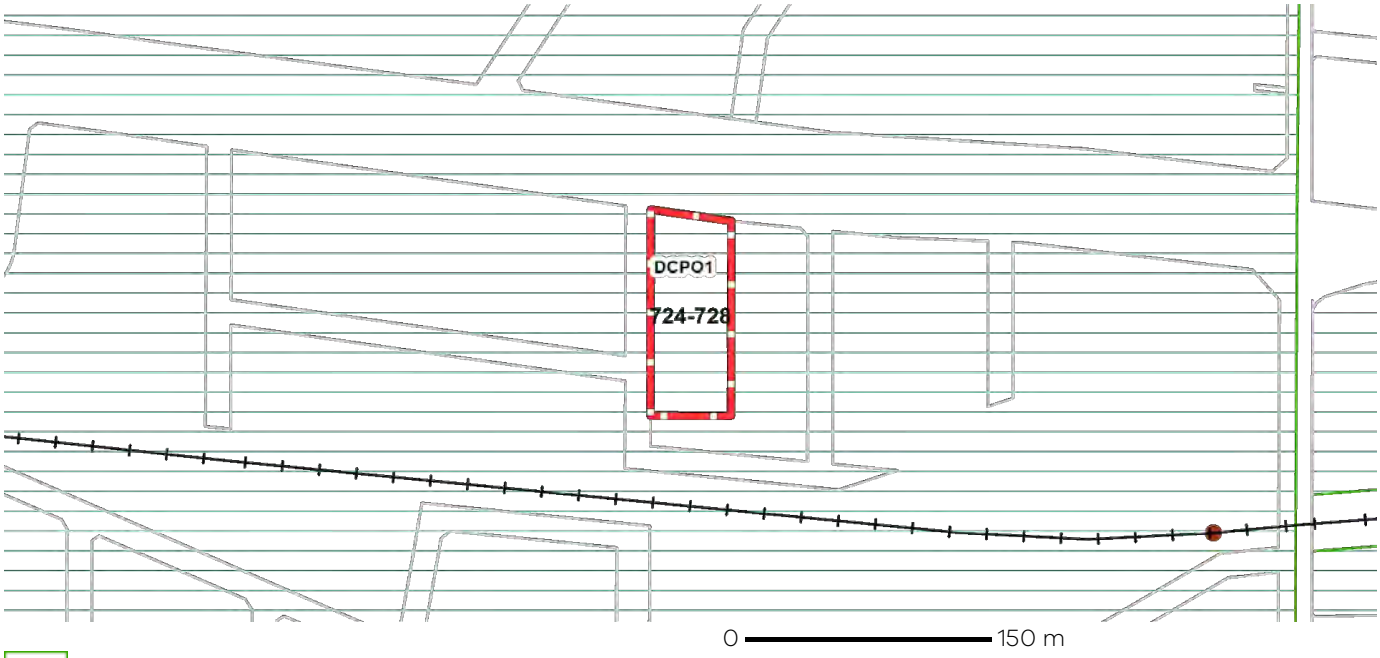
Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).

Planning Overlays

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY (DCPO) (WHITEHORSE)

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 1 (DCPO1) (WHITEHORSE)



DCPO - Development Contributions Plan Overlay **Railway line** **Railway station**

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

ENVIRONMENTAL AUDIT OVERLAY (EAO) (WHITEHORSE)

EAO - Environmental Audit Overlay **Railway line** **Railway station**

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

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Planning Overlays

SIGNIFICANT LANDSCAPE OVERLAY (SLO) (WHITEHORSE)

SIGNIFICANT LANDSCAPE OVERLAY - SCHEDULE 9 (SLO9) (WHITEHORSE)

SLO - Significant Landscape Overlay Railway line Railway station

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

VEGETATION PROTECTION OVERLAY (VPO) (WHITEHORSE)

VEGETATION PROTECTION OVERLAY - SCHEDULE 3 (VPO3) (WHITEHORSE)

VPO - Vegetation Protection Overlay Railway line Railway station

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

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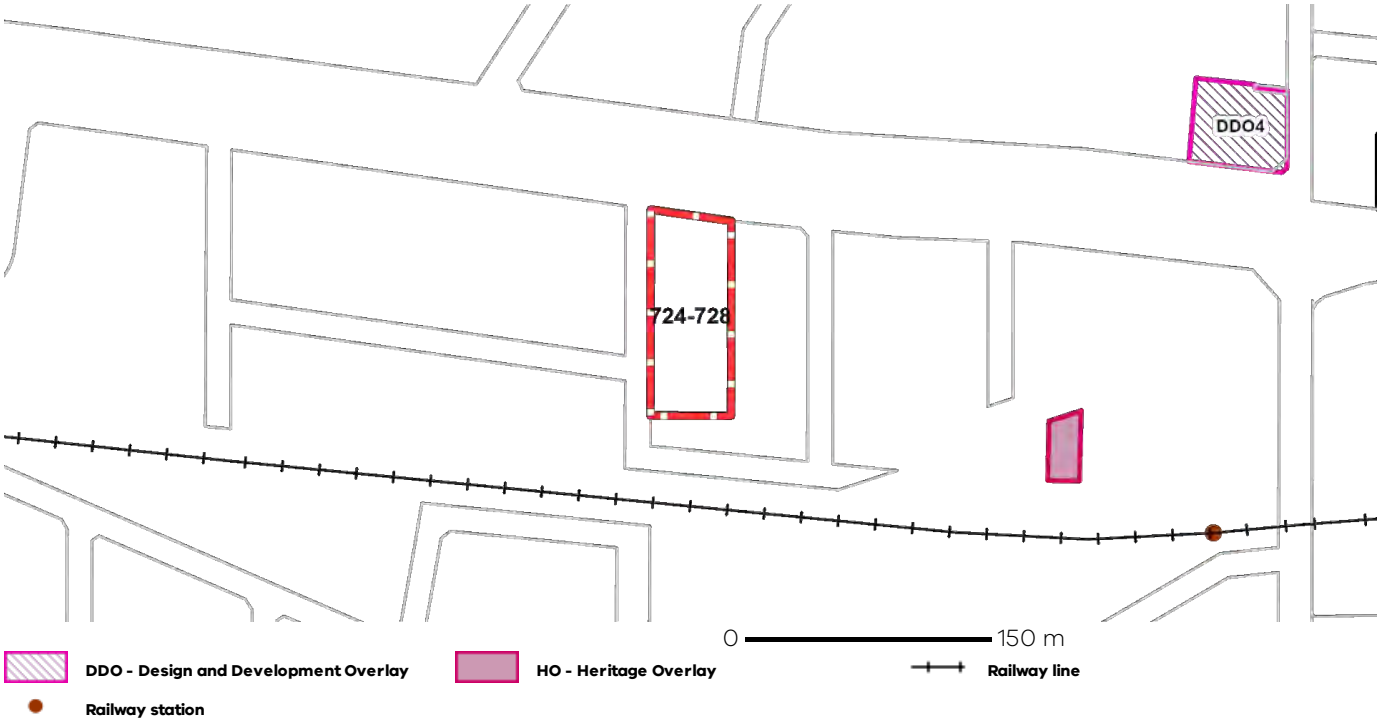
Planning Overlays

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

DESIGN AND DEVELOPMENT OVERLAY (DDO) (WHITEHORSE)
HERITAGE OVERLAY (HO) (MAROONDAH)
HERITAGE OVERLAY (HO) (WHITEHORSE)



Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

Further Planning Information

Planning scheme data last updated on 08 February 2025.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting https://www.planning.vic.gov.au

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the ***Planning and Environment Act 1987.***
It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit https://mapshare.maps.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

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PLANNING PROPERTY REPORT

Department of Transport and Planning

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire construction requirements apply to the part of the property mapped as a designated bushfire prone area (BPA). Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply.

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements.

Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA.

Designated BPA maps can be viewed on VicPlan at https://mapshare.vic.gov.au/vicplan/ or at the relevant local council.

Create a BPA definition plan in VicPlan to measure the BPA.

Information for lot owners building in the BPA is available at https://www.planning.vic.gov.au.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.vba.vic.gov.au. Copies of the Building Act and Building Regulations are available from http://www.legislation.vic.gov.au. For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au.

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see Native Vegetation (Clause 52.17) with local variations in Native Vegetation (Clause 52.17) Schedule

To help identify native vegetation on this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system https://nvim.delwp.vic.gov.au/ and Native vegetation (environment.vic.gov.au) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit NatureKit (environment.vic.gov.au)

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APPENDIX E: GROUNDWATER RESOURCE REPORT

Groundwater Resource Report

Groundwater catchment: East Port Phillip Bay **VICGRID94 Easting: 2518413 Northing: 2409241**

Depth to water table: 20 - 50m **Water table salinity (mg/L): 501 - 1000**

Groundwater layers (Aquifers and Aquitards)	Depth below surface (m)	Groundwater salinity (mg/L)
BSE Mesozoic and Palaeozoic Bedrock (basement) sedimentary (fractured rock): Sandstone, siltstone, mudstone, shale. Igneous (fractured rock): includes volcanics, granites, granodiorites.	0 - 200	1001 - 3500

There are no GMUs at this location

For further information about this report contact:
Department of Environment, Land, Water & Planning
Email: ground.water@delwp.vic.gov.au

For further information on groundwater licensing in this area contact:
Southern Rural Water Corporation
Phone: 1300 139 510
Email: srw@srw.com.au
Website: www.srw.com.au

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Printed: 24 January 2025
Date Updated: 11 January 2019

VICTORIA State Government | Environment, Land, Water and Planning

How to read this report

Introduction

Groundwater is part of the water cycle. When rain or snow falls on land, some of it evaporates, some flows to streams and rivers, and some seeps into the soil. Some of the water in the soil is used by plants but some continues to move down through the soil and rock until all the pores and cracks are full of water. This is known as the water table and this water is called groundwater.

Groundwater is a finite resource that, like surface water, is allocated under the Water Act (1989). A Bore Construction Licence is required to drill for groundwater including for domestic and stock purposes. Taking and using groundwater for commercial or irrigation purposes requires an additional licence.

Purpose of this report

This report has been prepared to provide potential groundwater users with basic information about groundwater beneath their property. This includes the different geological layers, the depths of the layers and the salinity of groundwater in the layers. Information on the groundwater management units (GMU) and any associated caps on the volume that can be licensed (the PCV) are also provided.

Definitions and context

Term	Description
Groundwater Catchment	An identified area of the State within which groundwater resources are connected.
Easting / Northing	The VICGRID 94 coordinates of the spot that was selected on the interactive map.
Groundwater Salinity	Indicates the possible concentration of salts within the groundwater. The salt content indicates the possible uses of the water (see the Beneficial Use Table below). Fertilisers and other contaminants can also enter groundwater and affect its use. It is up to you to make sure that the groundwater you use is suitable for your purpose.
Aquifer	An aquifer is a layer of soil or rock which stores usable volumes of groundwater. Aquifers are generally limestones, gravels and sands, as well as some fractured rocks where the cracks in the rock are open and connected (some basalts, sandstones and limestones). How much water can be pumped from an aquifer depends on how much water is stored in pores and cracks, how well connected the pores and cracks are, and how thick the layer is. It is more likely that volumes of water for irrigation and urban water supply will come from gravels, sands, limestones and basalts that are at least 30 metres thick. Low volumes of water for domestic and stock use are likely from any aquifer greater than 10 metres thick. The advice above is a guide only, as the amount of water available can be highly variable. Actual pumping volumes can only be determined from drilling, appropriate construction and testing of a bore.
Aquitard	An aquitard is a layer of rock or soil that does not allow water to move through it easily, limiting its capacity to supply water. Aquitards are generally silts, clays and fractured rocks (where there are few cracks in the rock or the cracks are poorly connected).
Groundwater Management Unit (GMU)	A collective term for groundwater management areas (GMAs) and water supply protection areas (WSPAs). GMAs and WSPAs are defined areas and depths below the surface where rules for groundwater use may apply. WSPAs often have caps on groundwater use and plans describing how the resource is managed. GMAs usually have caps on groundwater use and may have local plans and rules. All other areas are managed directly through the Water Act (1989). Always check with your local Rural Water Corporation to be sure that the information on the GMU is correct for your specific location.
Permissible Consumptive Volume (PCV)	A cap that is set under the Water Act (1989) declaring the total volume of groundwater that may be taken from the area. Once the PCV is reached, no additional extraction can be licensed for use within the area unless traded from another groundwater licence holder.
Depth to Water Table	This is an indication of the depth at which groundwater might first be encountered when drilling a bore. The depth can vary from year to year, and from place to place and may vary significantly from that indicated in this report.

Beneficial Use Table

Salinity range (mg/L TDS)	Beneficial use as described by State Environment Protection Policy (Groundwaters of Victoria) s160							
	Potable water - preferred	Potable water - acceptable	Potable mineral water	Irrigation	Stock water	Industry	Ecosystem protection	Buildings and structures
<500	✓	✓	✓	✓	✓	✓	✓	✓
501-1000		✓	✓	✓	✓	✓	✓	✓
1001-3500			✓	✓	✓	✓	✓	✓
3501-13000					✓	✓	✓	✓
13001+						✓	✓	✓

Accessibility

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APPENDIX F: AGS PRELIMINARY SITE INVESTIGATION (2024)

AGS
ENVIRONMENTAL SERVICES

ASBESTOS. GROUNDWATER. SOIL.

Assessing and Managing

your above and below ground risk

PRELIMINARY SITE INVESTIGATION WITH SOIL SAMPLING

724-728 Whitehorse Road, Mitcham

AGS240210-R01

27 February 2025

AGS Environmental Services Pty Ltd

16/23-25 Gipps Street, Collingwood

Ph: (03) 8528 1480

PRELIMINARY SITE INVESTIGATION WITH SOIL SAMPLING

Document Number: AGS240210-R01

Site Address: 724-728 Whitehorse Road, Mitcham

Date: 27 February 2025

Project Manager: Chris Hutton (chris@agses.com.au)

Client: Knowles Group Pty Ltd

Quality Information

Distribution

Issue	Revision	Issued To	Date	Signed	Reviewed
Draft	0	Knowles Group Pty Ltd	25/07/2024	Annabelle Rix	John Hogan
Final	01	EESI	27/02/2025	Annabelle Rix	John Hogan

Revision History

Revision	Date	Modified	Reviewed	Amendments / Changes
01	27/02/2025	AR	JH	Updated groundwater flow discussion in Section 3.1.8, soil bore logs inclusion as Appendix K and QA/QC discussion in Section 9.0.

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Executive Summary

AGS Environmental Services Pty Ltd (AGS) was engaged by Knowles Group (the client) to undertake a Preliminary Site Investigation (PSI) at 724-728 Whitehorse Road, Mitcham (the site) with soil sampling to provide a preliminary indication of the potential for the land to be contaminated for due diligence purposes. The site is 6,004m^2 in size, rectangular in shape and located on the corner of Whitehorse Service Road and Witt Street. AGS understands that the site is proposed to be developed into an aged care residential facility.

An Environmental Audit Overlay (EAO) exists at the site, which was emplaced as part of a planning scheme amendment (L40 December 1998) due to 'potential contamination in association with the school'. Given the existence of the EAO, it is considered highly likely that an Environmental Audit will be required to be completed as part of any future planning permit conditions for the site.

The desktop study/site history assessment indicated that the site was undeveloped green space until circa 1962, after which time the site was developed into the Mitcham Special School. The site has continued to be operated as an education facility up until 2023. Since this time, the site has been vacant.

The history of the surrounding area is predominantly agricultural until circa 1950 at which time the immediate area around the site started to be developed for residential purposes. Light industrial and commercial operations were also present along Whitehorse Road and Heatherdale Road including a former Dunlop Tyre Warehouse, which was operational from 1965 - 1979 was located ~280m to the east of the site.

Based on the findings of the PSI, and in accordance with Practice Planning Note 30 (PPN 30) - Potentially Contaminated Land (DELWP-2021), the site is considered to have a low potential for contamination. The most likely source of on-site contamination is associated with the potential importation of uncontrolled filling.

A limited soil assessment was undertaken which consisted of 10 soil bores progressed in an approximate grid-based manner around the site. Soils were assessed against human health criteria for 'low density residential land use' (i.e. HIL A) and off-site disposal criteria. No samples exceeded the adopted human health criteria and two samples reported elevated metal concentrations (arsenic and zinc) above off-site disposal criteria. While the soil assessment is preliminary in nature, based on the reported concentrations to date, it is considered likely that soils would be suitable for the proposed land use. It is also considered likely that the majority of the filling soils would be classified as 'Fill Material' for off-site disposal purposes with small, isolated areas (i.e. 'hotspots') potentially classified as 'Category D Reportable Priority Waste' for elevated concentrations of metals. It is noted that additional soil assessment works would be required to characterise the site in accordance with Australian Standards and additional analysis would be required to confirm the classification status for off-site disposal purposes.

A site inspection did not identify any potential contaminating underground or above ground infrastructure associated with fuel storage. An incinerator was present at the site associated with former waste disposal practices. No evidence of waste byproducts being disposed of on-site were noted during the inspection. Based on the age of the building and the building materials noted during the inspection, it is considered likely that asbestos containing materials (ACM) are present throughout the building structure. AGS

recommends a Division 6 Hazardous Materials Audit is undertaken to determine the presence, condition and extent of any ACM.

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1.0 Introduction

AGS Environmental Services Pty Ltd (AGS) was engaged by Knowles Group (the client) to undertake a Preliminary Site Investigation (PSI) at 724-728 Whitehorse Road, Mitcham (the site) with soil sampling to provide a preliminary indication of the potential for the land to be contaminated for due diligence purposes. AGS understands that the site is to be developed into a residential aged care facility.

An Environmental Audit Overlay (EAO) exists at the site, which was emplaced as part of a planning scheme amendment (L40 December 1998) due to 'potential contamination in association with the school'.

1.1 Cadastral Information

Information detailing the cadastral site details has been presented in **Table 1.**

Table 1. Cadastral Information

Site Address	724-728 Whitehorse Road, Mitcham
Melway Reference (edition 42)	49 C9
Site Area	6,004m^2
Title/Parcel	Lot1 PS448313 Volume 11028 Folio 290
Council Property Number	254057
Site Centroid (MGA 55)	342364 (metres East) 5812905 (metres North)
Local Government	Whitehorse
Proprietor	Nadrasca of 52-62 Rooks Road Nunawading Vic 3131
Zoning	General Residential Zone (GRZ) General Residential Zone – Schedule 2 (GRZ2)
Overlays	Significant Landscape Overlay (SLO) Significant Landscape Overlay – Schedule 9 (SLO9) Environmental audit Overlay (EAO) Vegetation Protection Overlay (VPO) Vegetation Protection Overlay – Schedule 3 (VPO3) Development Contributions Plan Overlay (DCPO) Development Contributions Plan Overlay – Schedule 1 (DCPO1)
Current Use	Vacant – Most recently in operation as a school
EPA Priority Site	No
EPA Priority Site (within 500m)	No

Copies of the property and planning property reports are presented in **Appendix B.**

1.2 Previous Assessment Works

AGS is not aware of any previous assessments undertaken at the site.

2.0 Scope of Works

During the site history/desktop study assessment, the following sources were used to ascertain the potential contamination status of the site.

2.1 Background Information

- Land Victoria Database (www.land.vic.gov.au)
- Applicable geological and hydrogeological records;
- Available council and government agency applicable records;
- Dial Before You Dig information;
- Cathodic Protection System database;
- Site inspection; and
- Available anecdotal information;

2.2 Site History Information

- The Victorian Aerial Photographic Collection;
- The Sands and McDougall Directory (listing former site owners and associated land uses);
- Current and historic title records;
- Melbourne Metropolitan Board of Works (MMBW); and
- 1966 Melways (Edition 1).

2.3 EPA Victoria Information

- Priority Sites Register;
- Review of issued Statements and Certificates of Audit in the vicinity of the site; and
- EPA Victoria listings of current and known former landfills (from Victoria Unearthed).

3.0 Site History/Desktop Study Assessment

3.1 Background Information

3.1.1 Site Location and Current Title

The site is approximately 6,004m^2 in size, rectangular in shape and located on the corner of Whitehorse Service Road and Witt Street.

The site location is presented in **Figure 1**.

As of 4 September 2007, the sole proprietor of the site is Nadrasca of 52 – 62 Rooks Road, Nunawading Vic 3131. A copy of the certificate of title is presented in **Appendix C.**

3.1.2 Current Land Use and Site Condition

A site inspection was undertaken by AGS in July 2024. At the time, the site had been vacated. The site footprint comprised of a large building located in the central northwestern portion of the site, previously used for education purposes. At the south end of Witt Street is an onsite driveway that wraps to the eastern portion of the site. The driveway is comprised of a mixture of concrete and asphalt. Garden beds are located on the western and northern boundary of the site.

3.1.3 Surrounding Site Uses

The surrounding area is predominantly residential, with the neighbouring properties to the east, south and west of the site having residential land uses. Whitehorse Service Road, Whitehorse Road / Maroondah Highway are to the immediate north of the site. Approximately 380m east of the site (inferred down hydraulic gradient) is an industrial estate. Within this estate, there are various vehicle repair shops, an electrical substation, a recycling centre and a food manufacturer.

3.1.4 Proposed Future Land Use / Development

AGS understands that the site is proposed to be redeveloped into an aged care facility.

3.1.5 Previous Assessments

AGS is unaware of any previous assessments undertaken at the site.

3.1.6 Regional Geology

Visualising Victoria's Groundwater interactive GeoVic Map indicates that the site is underlain by Llandovery to Wenlock aged Anderson Creek Formation (Sxa), comprising siltstone, sandstone and conglomerate formations.

3.1.7 Acid Sulphate Potential

AGS reviewed the Department of Sustainability and Environment *Victorian Coastal Acid Sulfate Soils Strategy* (2009) – Map 3: Central Coast, and the site does not fall within an identified Coastal Acid Sulfate Soil zone.

3.1.8 Regional Hydrogeology

The following sources of information were used to characterise the regional hydrogeology in the area of the site:

- Hydrogeological maps and publications;
- Past hydrogeological assessments in the vicinity; and
- Visualising Victoria's Groundwater (VVG) Groundwater Database.

The site is part of the Port Phillip Basin (Groundwater resources map of Victoria, 1:1,000,000). Groundwater beneath the site is expected to have Total Dissolved Solids (TDS) concentrations of approximately 500-1,000mg/L according to the VVG database, placing groundwater in Segment A1 (TDS between 0 and 600mg/L) or Segment A2 (TDS between 601 and 1,200 mg/L) of the Environmental Reference Standard. Nearby audited sites (within 500m of the site) have reported TDS concentrations ranging within Segment C of the Environmental Reference Standard. Groundwater depth is anticipated to be between 20-50m below ground level according to the VVG database.

The nearest receiving body of water is Mullum Mullum Creek, which is located approximately 660m northeast of the site, however, groundwater is expected to flow in a southerly direction, towards the Dandenong Creek which is located approximately 2.6km south of the site and is considered to be the likely point of discharge for groundwater.

AGS conducted a search of the VVG Groundwater Database on 15 July 2024. The search located 41 registered groundwater bores within 2km of the site.

Results from the database search are summarised in **Table 2**, and presented in greater detail in **Appendix D**.

Table 2. Groundwater Database Summary

Database	VVG Groundwater Database (www.vvg.com.au)
Radius of Database Search	2,000m
Groundwater Bores Identified	Approximately 41
Types of Bores Identified	Groundwater Investigation (assumed for environmental assessment works, given the area), Dewatering and Observation.
Groundwater Bore Depth Range	4m – 55m
General Aquifer Type	Anderson Creek Formation

3.1.9 Cathodic Protection Systems Search

A search by Energy Safe Victoria did not identify a cathodic protection unit at the site. Please refer to **Appendix E** for the documentation confirming this.

3.1.10 Dial Before You Dig Information

A review of available Dial Before You Dig information (accessed via www.1100.com.au) has identified the following authorities to have assets in close proximity to the site:

- Multinet Gas – Medium pressure pipes run along Witt Street, Tennyson Street and Whitehorse Road;
- Melbourne Water – Water mains run beneath the southern side of Whitehorse Road and Tennyson Street;

- Optus and or Uecomm Vic – There are underground Optus cables located beneath the northeastern portion of the site and Uecomm assets located along Whitehorse Road;
- United Energy – A distribution substation is located on the eastern boundary of the site and low voltage cables intersect the site in various locations;
- VicTrack Access – a VicTrack Rail Reserve is located to the south of the site;
- Whitehorse City Council – Storm water assets are located within the vicinity of the site;
- Yarra Valley Water Ltd – Water mains, a water valve, a below ground hydrant and an above ground hydrant are located to the north of the site; and
- Telstra VICTAS – Standard cables and joining pits intersect the northern and eastern boundary of the site.

Copies of the relevant plans are presented in **Appendix F**.

3.1.11 Sub-Surface & Above Ground Infrastructure

AGS attended site on 18 July 2024 to assess the current site conditions. Other than a historic incinerator, which is located in the central portion of the site there is no evidence of potentially contaminating above or below ground infrastructure present on site, given the history of the site and the absence of external fill points or breather pipes that would indicate a below ground storage tank.

3.1.12 Anecdotal Information

No relevant anecdotal information has been provided to AGS.

3.1.13 Council Records

AGS contacted Whitehorse City Council to obtain any relevant documentation relating to the site. Council 'explored the reasoning behind the EAO' and were 'unable to find a definitive answer' as to why the EAO exists at the site. A council representative did note however that 'the overlay was emplaced as part of a planning scheme amendment (L40 December 1998) due to potential contamination in association with the school'.

3.2 Site History

3.2.1 Review of Aerial Photographs

A summary of the findings of the aerial photograph review is presented in **Table 3.**

Table 3. Aerial Photograph Review

Date	History Detail	Reference
1945	**On-Site:** The sites land use appears to be an undeveloped green space, with a dense vegetation spread. **Off-Site:** The majority of the surrounding land use appears to be agricultural, with structures spread sporadically, corelating with the agricultural blocks. Whitehorse Road is present to the north of the site and the railway corridor to the south of the site is present.	1945.melbourne

Date	History Detail	Reference
1956	**On-Site:** The site appears to still be undeveloped green space, covered by dense tree vegetation. There are no onsite structures. **Off-Site:** The residential density of the surrounding area has increased, particularly to the west of the site and to the north beyond Whitehorse Road. There is still a large number of agricultural properties in the vicinity of the site.	Landata
1962	**On-Site:** The site has been developed, and there is now a large structure encompassing the north-western portion of the site. It appears that a hardstand concrete slab is present across the remainder of the site. **Off-Site:** The density of residential properties has continued to increase, and now agricultural blocks are extremely sparse.	Landata
1972	**On-Site:** The site appears unchanged from the 1962 aerial photograph. **Off-Site:** The area is similar to that observed in 1962. The density of residential properties has continued to increase.	Landata
1984	**On-Site:** The site appears unchanged from the 1972 aerial photograph. **Off-Site:** The area is similar to that observed in 1972.	Landata
2009	**On-Site:** The site appears unchanged from the 1984 aerial photograph. The vegetation in the onsite garden beds consists of large established trees. **Off-Site:** The surrounding land appears essentially unchanged.	Nearmap
2019	**On-Site:** The site appears unchanged from the 2009 aerial photograph. **Off-Site:** The surrounding land appears essentially unchanged.	Nearmap
2024	**On-Site:** The site appears unchanged from the 2019 aerial photograph. **Off-Site:** The surrounding land appears essentially unchanged.	Nearmap

3.2.2 Review of Sands & McDougall's Directories of Melbourne and Suburbs

AGS conducted a review of surrounding audited sites to determine off-site land uses as identified in the Sands & McDougall historical records. A summary of the findings is presented in **Table 4**.

Table 4. Sands & McDougall Directories Information

Year	Site Use	Surrounding Land Uses
1940	Vacant/ Address not listed	Potentially nearby contaminating historical land uses include; • 730 Whitehorse Road: Mitcham Motor Garage • 808 Whitehorse Road: Hall, R. W., & Bloom Pty Ld. Timber merchants
1950	Vacant/ Address not listed	Potentially nearby contaminating historical land uses include; • 730 Maroondah Highway: Mitcham Motor Garage • 618 Maroondah Highway: Peak & Cox, Timber Makers • 668 Maroondah Highway: Station Mtrs, Motor Engineers • 754 Maroondah Highway: Hall, R. W. & Bloom Pty Ld, Timber Merchants
1960	Vacant/ Address not listed	Potentially nearby contaminating historical land uses include; • 762 Maroondah Highway: Penguin Books Py Ld, book wholesale • 566-568 Maroondah Highway: Mitcham Motors • 596-606 Maroondah Highway: Hall & Bloom Py Ld, timber merchants

Year	Site Use	Surrounding Land Uses
1970	724-728 Whitehorse Road: School for Disabled Children	Potentially nearby contaminating historical land uses include; • 535 Whitehorse Road: Peacock E & J Service Station • 557 Whitehorse Road: Mobile Service Station • 582 Whitehorse Road: Embee Engine Servs P/L motor engineers • 584 Whitehorse Road: Spotless Ld Dry Cleaners • 603 Whitehorse Road: Wride & Abley Construction P/L garage mnfrs • 605 Whitehorse Road: Manley M Motors (Pre owned cars) • 619 Whitehorse Road: Martin Vitrified Clay Pipe Makers • 621 Whitehorse Road: Daspal Engineering works and Steel Yard • 636-646 Whitehorse Road: Tucker Industries P/L eyelet manufacturers • 762 Whitehorse Road: Dunlop Tyre Services P/L

3.2.3 Historical Certificates of Titles

AGS has undertaken a review of historic titles, and the findings of this review are summarised below with title details presented in **Appendix C**. A summary is presented in **Table 5.** The review of historic titles is limited as title 10481/758 did not list a parent title and the folio creation was created as a computer folio.

Table 5. Historical Certificates of Titles

Date	Title (Volume / Folio)	Title Information
Historic Titles		
28/06/1999	10481/758	Nadrasca Incorporated of 1-19 Colombo Street, Mitcham is the proprietor of the estate.
23/10/2003	10759/300	Nadrasca Incorporated of 1-19 Colombo Street, Mitcham is the proprietor of the estate.
Current Titles		
04/09/2007	11028/290	Nadrasca of 52-62 Rooks Road Nunawading Vic 3131 is the proprietor of the estate.

Based on a limited review of historical title, aerial photographs dating back to 1945 and Sands & McDougall's Directories, it was likely that the site was an undeveloped green space up until circa. 1962. Following this, the site was then used for educational purposes, as a Special Development School. The site was used for this purpose up until 2023, which after it was vacated.

3.2.4 1966 Melways (Edition 1)

In the 1966 Melways (Edition 1) the site is marked as the Micham Special School. Please refer to **Appendix G** for Page 49 of that edition.

3.3 EPA Victoria Information

3.3.1 EPA List of Issued Certificates and Statements of Environmental Audit

AGS undertook a review of audited sites within 500m of the site which were issued with either Statements or Certificates of Environmental Audit and were available from the Victorian EPA database for review. The sites which have been identified are presented in **Table 6**. A figure showing location of surrounding audited sites is presented in **Figure 10**.

Table 6. Surrounding Audited Sites

Property Location	CARMS	Distance from Site (m)	Direction from Site	Completion Date	Inferred Hydraulic Relationship to Site
762-764 Whitehorse Road, Mitcham	N/A	280	W	August 2023	Cross gradient
Corner of Good Governs Street and Purches Street	24294-1	340	S	October 1994	Up gradient

762-764 Whitehorse Road, Mitcham (completed August 2023)

The site history investigation indicated that the site was owned by merchants from the early 1920s and a "rubber worker" in 1939. In 1953, the site was used for wholesale bookselling. In 1965, Dunlop Rubber took ownership of the site and occupied the site until circa 1979. After this time, the site ownership transferred through a number of companies whose activities onsite are unknown, however based on the site history documentation reviewed, it is considered likely that the site was predominantly used for commercial storage.

Soils remaining on-site at the completion of the Audit reported elevated concentrations of pH, barium, manganese and zinc exceeding the adopted ecological assessment criteria. In summary, the site in its current condition threatens one or more environmental values of land in the context of unrestricted land use and therefore the Auditor has issued an Environmental Audit Statement with recommendations to manage the risk of harm to the environment from soil at the site.

In the context of the proposed childcare facility development, where the site is constructed in accordance with the proposed development plans and with the construction (and ongoing implementation) of the management measures outlined within the EMP for the site (also attached to the Statement of Environmental Audit), the site is considered suitable for the proposed use and the environmental values of 'Land Dependent Ecosystems and Species', 'Human Health', 'Aesthetics' and 'Production of Food, Flora and Fibre', would not be threatened.

Two groundwater monitoring events (GMEs) were undertaken during the Audit (with additional initial sampling undertaken prior to well installation used for indicative purposes only, which reported no elevated contaminant concentrations exceeding the adopted groundwater assessment criteria). Based on the groundwater investigation works completed at the site, concentrations of pH, chloride, sodium, copper and zinc exceeding the adopted assessment criteria for the protection of one or more environmental values, have been identified in groundwater at the site.

As only one well was installed at the site, the well was not surveyed and an assessment of local groundwater flow was not undertaken. Given the regional topography and distance to nearest water receptors, groundwater beneath the site is anticipated to flow to the south, towards Dandenong Creek.

The Auditor considers that concentrations of pH, chloride, sodium, copper and zinc are representative of natural background concentrations within the aquifer and as such do not constitute contamination.

Detectable concentrations of chloroform were reported at low concentrations below the adopted assessment criteria in groundwater at the site. No detectable concentrations of chloroform (or any other chlorinated hydrocarbons) were reported in any soil sample at the site. The Auditor further noted that low level concentrations of chloroform, trihalomethane and dichloromethane were reported at the audit site 58-74 Station Street, Nunawading, located approximately 2.8 km west of the site; considered to be cross gradient of the site. The reported concentrations were considered to be from an unidentified off-site source. Therefore, the low concentrations of chloroform in groundwater are not considered to constitute groundwater contamination at the site, and there is no potential on-going source of these contaminants considered to be present at the site.

The auditor concluded that the site is considered suitable for the proposed use and the environmental values of 'Land Dependent Ecosystems and Species', 'Human Health', 'Aesthetics' and 'Production of Food, Flora and Fibre', would not be threatened.

Based on the results of the groundwater monitoring events undertaken for this site, the inferred hydraulic groundwater flow direction and the distance from the subject site, AGS considers it unlikely that groundwater contamination from 762-764 Whitehorse Road will impact the site.

Corner of Good Governs Street and Purches Street (completed October 1994)

The site was occupied by the Department of Education between 1956 and 1994 and operated as the Heatherdale Primary School from 1964. In early 1994, the land was sold to Aprigreen Py Ltd who proposed to subdivide and sell the land for approximately 30 low density residential allotments.

Potential contamination sources were as follows:

- 3 x underground diesel fuel storage tanks;
- Asbestos in gaskets and asbestos-cement sheeting;
- Pesticide application for weed or insect control;
- Imported fill material; and
- Shed for mower and other equipment storage.

The three USTs were removed from the site along with odorous (hydrocarbon odours) soil.

No elevated contaminant concentrations were identified in soil.

Groundwater was not encountered during soil assessment works at a depth of approximately 4.6 mbgl.

The audit report concluded that given the very low contaminant concentrations in site soils and the expected depth to water, there was considered to be negligible risk of groundwater contamination from site activities.

Given the distance form the subject site, the low contaminant concentrations reported in the results and the distance to the groundwater table, AGS considers that it unlikely that impacts from the USTs will influence groundwater conditions beneath the subject site.

3.3.2 EPA Priority Sites Register

A search of the EPA Priority Sites Register was conducted on 15 July 2024, and as of this date the site is not listed as a Priority Site. There are no priority sites within a 2km radius of the site.

3.3.3 EPA Landfill Register

A search of the EPA Landfill Register was conducted on 15 July 2024. No landfills are located within a 1km radius of the site. The closest former landfill is located approximately 1.3km north of the site. This landfill is no longer accepting waste. Based on the distance of the identified landfills in the surrounding area to the site, AGS does not consider landfill gas from former known landfills to be a contaminant of concern.

4.0 Site Inspection

An AGS representative attended site in July 2024 to assess the current site conditions. The site was found to have been vacated and based on anecdotal information provided to AGS, had been for approximately twelve months. AGS understands that the site was previously used for disabled adult educational purposes.

General building materials included brick walls and a metal roof. Evidence of potential asbestos containing materials (ACM) within the building materials was noted during the site inspection. Within the building, there was evidence of what appeared to be water damage to the ceiling. The majority of the site was encapsulated by either concrete or asphalt, which, other than some aesthetic damage (small cracks), appeared to be in relatively good condition with little to no staining present. The remainder of the site perimeter was covered by garden beds, with plants appearing to be healthy. The general floorplan of the building included a hallway which ran north to south, with various classrooms, kitchen facilities, bathroom facilities, offices, meeting rooms and storage rooms adjoining the hallway. A signed chemical storage area cleaning cupboard adjoining the reception area was noted to be empty. An indoor pool was located in the northern portion of the building, with associated pool/spa heating control infrastructure.

A second chemical storage room/cupboard was unable to be opened during the site inspection. Anecdotal information provided to AGS by the site owner suggested that the room/cupboard was empty and was likely previously stocked with cleaning products. A brick-based historic incinerator was located in the central portion of the site with an associated chimney. There were no signs of any other sub-surface or above ground infrastructure at the site during the site inspection.

5.0 Potential Sources and Contaminants of Concern

The potential sources of contamination associated contaminants of primary concern (CoPC) were identified based on the desktop study, site history review and observations made during the site inspections. The potential CoPC associated with on-site and off-site activities are summarised in **Table 7.**

Table 7. Contaminants of Potential Concern

Location	Potential Source / Activity	CoPC
On-site	Imported filling	Heavy Metals, TRH, BTEX, PAH, OCPs and ACM
	Historical burning of waste using the on-site incinerator	Heavy Metals, PAHs
	Dunlop Tyre Warehouse / Tyre Servicing / Grease Trap (~280m from site)	Heavy Metals, BEX, TRH, PAHs, MAHs, solvents including chlorinated hydrocarbons

5.1 Summary of Land Uses and Potential Contaminants of Concern

A review of planning documentation indicated that an Environmental Audit Overlay (EAO) and Development Contributions Plan Overlay is applicable for the site. In accordance with the Department of Environment, Land, Water and Planning (DELWP) Planning Practise Note 30 (PPN 30) 2021, a potential contamination rating of high, medium or low has been assigned and the various land uses as shown below in **Table 8.** The ratings reflect the likelihood of contaminants to be present on the subject site.

Table 8. Summary of Land Use and Potential for Contamination

Location	Former Land Use	Current Land Use	Potentially Contaminating Activities / Features	Potential for contamination	Comments
Onsite	Agricultural/ Special Development School	Vacant	Imported filling	Low	Minimal evidence of uncontrolled imported filling was noted during the soil sampling event and no sample exceeded the adopted human health screening criteria.
			Incinerator use - waste products	Low	No evidence of waste byproducts being disposed of on-site was noted during the site inspection.
Off-site	Agricultural/ Light Industrial/ Residential/ Commercial	Light Industrial/ Residential/ Commercial	Dunlop Tyre Warehouse / Tyre Servicing / Grease Trap (~280m from site)	Low	Given the distance to the site and the inferred hydraulic relationship, the potential for contamination impacting the site is considered low.

6.0 Sampling Analysis and Quality Plan

6.1 Data Quality Objectives (DQO)

DQO's were adopted as per the AGS Standard Operating Procedures presented in **Appendix A.**

6.2 Soil Assessment SAQP

The methodology relevant to the soil investigation is outlined in **Table 9** and presented in further detail in **Appendix A.**

Table 9. Soil Investigation Fieldwork Scope and Methodology

Item	Detail
Field Work Date	12 July 2024
Strategy and Density	Grid-based across the site. In accordance with Table E1 of AS4482.1 (2005), for a site approximately 0.6ha, the minimum sampling density is 15 locations, however, 10 locations were chosen to provide a baseline understanding of the soil contamination given the investigation is for due diligence purposes.
Target Depth	Boreholes were to a depth of at least 0.5m into the natural clay interface as presented in the soil bore logs in **Appendix K**.
Concrete Cutting	Concrete was cut at five of the locations by an appropriate sub-contractor to allow access to underlying soils.
Laboratory Analysis	As per **Table 10**.

6.2.1 Soil Laboratory Analytical Program

Table 10 lists the analytical suite that was adopted during the soil assessment works. Please refer to **Appendix H** for the chain of custody documentation for the on-site works.

Table 10. Soil Assessment Analytical Suite

Location			Number of Samples Analysed	Analytical Suite
Gid Based Soil Assessment	Primary Samples	Site Filling	2	IWRG621 Screen
			8	TRH, BTEX, PAH, 8 Metals

IWRG621 Screen: TRH, PAH, Phenols, OCP, PCB, VOC, Vinyl Chloride, Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn, Cr6+), Cyanide, Total Fluoride, pH
(v)TRH: (volatile) Total Recoverable Hydrocarbons
BTEX: Benzene, Toluene, Ethylbenzene, Xylene
PAH: Polycyclic Aromatic Hydrocarbons
8 Metals: As, Cd, Cr, Cu, Hg, Ni, Zn, Pb

7.0 Assessment Criteria

Soil samples collected during in-situ sampling works will be assessed against off-site disposal criteria, in accordance with EPA Victorian Publication 1828.2 and Victorian Industrial Waste Resource Guidelines 702 (IWRG702). Due to the preliminary nature of this investigation soil samples will also be assessed against the most conservative human health criteria (NEPM HIL A) for low-density residential land use as opposed to ecological criteria, in accordance with the Environment Reference Standard and the NEPM.

8.0 Intrusive Soil Assessment

8.1 Field Observations

At the time of the soil sampling event on 12 July 2024, the site was vacant. At locations SB03 – SB07, directly beneath the concrete / asphalt slab were large, angular gravels for approximately 0.1m depth. These gravels were underlain by wet, compacted orange clays, with a high density and high plasticity.

At locations SB01, SB02 and SB08 – SB10, filling soils consisted of dark grey clayey silt, with angular crushed rock inclusions and minor gravels. Natural soils were encountered at depth and consisted of

brown to tan with orange mottling silty clays, becoming stiff at depth. No odours or staining were noted within the filling at the site. All PID concentrations were less than 10ppm, indicating no gross volatile contamination. Soil bore logs are presented in **Appendix K.**

No asbestos containing material (ACM) was noted within the fill at the site and no considerable rubble or inert waste was identified.

8.2 Results

All laboratory results are summarised as tables in **Appendix I**. All NATA accredited Laboratory Reports are included as **Appendix J**.

Samples exceeding the adopted assessment criteria for inorganic and organic analytes are presented in **Table 11.**

Table 11. Samples Exceeding Adopted Criteria – Soils

Analyte	Lowest Concentration (mg/kg)	Highest Concentration (mg/kg)	Samples Exceeding Criteria	Reported Concentrations (mg/kg)	Criteria Exceeded
Arsenic	2.3	27	SB07/0.2	27	4
Zinc	17	600	SB09/0.2	600	4

Key to Criteria Exceeded:
1 – Category 'B' Upper Threshold
2 – Category 'C' Upper Threshold
3 – Category 'D' Upper Threshold
4 – Fill Material Upper Threshold
5 – NEPM HIL'A'

8.3 Discussion

8.3.1 Human Health Criteria

All samples reported concentrations below the adopted human health criteria. While the sampling density is less than the Australian Standards for site characterisation (for a site approx. 6,000m^2 in size), the soils are considered likely suitable for the proposed land use.

8.3.2 Off-Site Disposal Classification

Elevated concentration of arsenic and zinc were reported in the site filling, exceeding the *Fill Material* upper threshold in accordance with EPA Publication 1828.2.

The 95% Upper Confidence Limit (UCL) average demonstrates with 95% confidence that the average contaminant concentration of the soil represented by the data set is at or below the concentration stated.

AGS undertook 95% UCL calculations for the follow analytes:

- Arsenic, which reported a 95% UCL of 11.45 mg/kg **(Fill Material)**; and
- Zinc, which reported a 95% UCL of 221mg/kg **(Category D)**.

Please refer to **Appendix J** for these results.

8.3.3 Distribution of Contamination

The elevated concentration of zinc at SB09, located in the western portion of the site, appears to be representative of a potential hotspot of contamination, rather than to be indicative of widespread soil contamination across the site. As such, the soils surrounding SB09 are considered to be a potential 'hotspot'. Additional sampling and analysis (i.e. leachability analysis – ASLP) is required to confirm the classification status of the soils in accordance with EPA Publication 1828.2. However, based on the concentrations reported to date, it is considered likely that the majority of the filling soils would be classified as 'Fill Material' with small amounts of soil (i.e. 'hotspot(s)') classified as 'Category D Reportable Priority Waste' for elevated metal concentrations.

9.0 Data Quality Objectives

The NEPM (2013) and Australian Standard AS4482.1 (2005) recommend that data quality objectives (DQO's) be implemented during the investigation of potentially contaminated sites. This process is adapted from the US EPA Guidance on Systematic Planning Using the Data Quality Objectives Process (2006). The purpose of the DQO process is to define the objectives of a site assessment and to allow an appropriate sampling and analysis plan to be developed to meet those objectives.

The sampling conducted is considered to be suitable in determining the current contamination status of soil at the site based on the following:

- No apparent anomalies were observed between the laboratory results and field observations;
- The laboratory reported a sufficient frequency of QC to assess whether the results have been reported to an acceptable accuracy and precision;
- Samples were analysed and reported as requested on the COC;
- Samples were correctly preserved and chilled with ice; and
- Samples were extracted and analysed within recommended holding times.

10.0 Conceptual Site Model (CSM)

AGS has developed a conceptual site model (CSM), taking into consideration the findings of the desktop study/site history assessment and the works conducted at the site. The CSM will also attempt to identify any data gaps which may warrant further investigation.

10.1 Site Characteristics

General site characteristics are presented in **Section 1.1** of this PSI. In addition to the on-site characteristics, AGS provides the following information regarding the general area.

10.1.1 Climate

The site is situated in a temperate climate zone, being the general inner Melbourne suburban area. According to the Bureau of Meteorology Mitcham weather station, (Station Number: 86074), the mean annual rainfall at the site is 843.2mm (data between years 1937 and 2023). The months of highest rainfall are typically May, October and November.

10.1.2 Site History

Using all historical information, it is inferred that the site was undeveloped green space, and then became a Special Development School in circa. 1962.

10.1.3 Current Site Conditions

The site is currently vacant. The site footprint comprised of a large building located in the central north-western portion of the site, previously used for education purposes. At the south end of Witt Street is an onsite driveway that wraps to the eastern portion of the site. The driveway is comprised of a mixture of concrete and asphalt. Garden beds are located on the western and northern boundary of the site.

10.1.4 Regional Geology and Hydrogeology

The site is underlain by Llandovery to Wenlock aged Anderson Creek Formation (Sxa), comprising siltstone, sandstone and conglomerate.

The site is part of the Port Phillip Basin (Groundwater resources map of Victoria, 1:1,000,000). Groundwater beneath the site is expected to have Total Dissolved Solids (TDS) concentrations of approximately 500-1,000mg/L according to the VVG database, placing groundwater in Segment A1 (TDS between 0 and 600mg/L) or Segment A2 (TDS between 601 and 1,200 mg/L) of the Environmental Reference Standard. Nearby audited sites (within 500m of the site) have reported TDS concentrations ranging within Segment C of the Environmental Reference Standard. Groundwater depth was anticipated to be between 20-50m below ground level according to the VVG database.

The nearest receiving body of water is Mullum Mullum Creek, which is located approximately 660m northeast of the site and is considered to be the point of discharge for groundwater.

10.1.5 Soil Conditions

At locations SB03 – SB07, directly beneath the concrete / asphalt slab was large, angular gravels for approximately 0.1m depth. These gravels were underlain by wet, compacted orange clays, with a high density and high plasticity.

At locations SB01, SB02 and SB08 – SB10, filling soils consisted of dark grey clayey silt, with angular crushed rock inclusions and minor gravels. Natural soils brown to tan with orange mottling silty clays, becoming stiff at depth. No odours or staining were noted within the filling at the site. All PID concentrations were less than 10ppm, indicating no gross volatile contamination.

No asbestos containing material (ACM) was noted within the fill at the site.

10.2 Sources of Contamination

The potential sources of contamination on-site are associated with the importation of uncontrolled filling and historical burning of waste using the on-site incinerator. The potential contaminants of concern include, but are not limited to:

- Heavy Metals, TRH, BTEX, PAH, OCPs and ACM from imported filling; and
- Heavy Metals and PAHs from historical burning of waste using the on-site incinerator.

Based on reviews of local audited sites, groundwater may report elevated concentrations of pH, chloride, sodium, copper and zinc which are considered to be representative of natural background concentrations within the aquifer.

10.3 Receptors

Based on the proposed residential land use, the following receptors have been identified:

- The environment (Mullum Mullum Creek);
- Future residents of the aged care facility; and
- Maintenance and constructions workers.

10.4 Pathways

Based on the findings of the investigations undertaken at the site, the following potential exposure pathways may be expected to occur for the proposed residential land use, including those involved with the construction phase:

- Acute and sub-chronic exposure (by either dermal, inhalation or ingestion) to contaminants in soil; and
- Chronic exposure to soil vapour (inhalation) due to the migration of volatile contaminants that may be present in the groundwater (considered unlikely however due the low potential for groundwater contamination and the anticipated depth to groundwater).

11.0 Conclusions/Recommendations

An Environmental Audit Overlay (EAO) exists at the site, which was emplaced as part of a planning scheme amendment (L40 December 1998) due to 'potential contamination in association with the school'. Given the existence of the EAO, it is considered highly likely that an Environmental Audit will be required to be completed as part of any future planning permit conditions for the site.

The desktop study/site history assessment indicated that the site was undeveloped green space until circa 1962, after which time the site was developed into the Mitcham Special School. The site has continued to be operated as an education facility up until 2023. Since this time, the site has been vacant.

The history of the surrounding area is predominantly agricultural until circa 1950 at which time the immediate area around the site started to be developed for residential purposes. Light industrial and commercial operations were also present along Whitehorse Road and Heatherdale Road including a former Dunlop Tyre Warehouse, which was operational from 1965 - 1979 was located ~280m to the east of the site.

Based on the findings of the PSI, and in accordance with Practice Planning Note 30 (PPN 30) - Potentially Contaminated Land (DELWP-2021), the site is considered to have a low potential for contamination. The most likely source of on-site contamination is associated with the potential importation of uncontrolled filling.

Based on the soil assessment works conducted, it is considered likely that soils would be suitable for the proposed land use. It is also considered likely that the majority of the filling soils would be classified as 'Fill Material' for off-site disposal purposes with small, isolated areas (i.e. 'hotspots') potentially classified as 'Category D Reportable Priority Waste' for elevated concentrations of metals. It is noted that additional soil assessment works would be required to characterise the site in accordance with Australian Standards and additional analysis would be required to confirm the classification status for off-site disposal purposes.

A site inspection did not identify any potential contaminating underground or above ground infrastructure associated with fuel storage. An incinerator was present at the site associated with former waste disposal practices. No evidence of waste byproducts being disposed of on-site were noted during the inspection. Based on the age of the building and the building materials noted during the inspection, it is considered likely that asbestos containing materials (ACM) are present throughout the building structure. AGS recommends a Division 6 Hazardous Materials Audit is undertaken to determine the presence, condition and extent of any ACM.

12.0 Limitations

This report has been prepared by AGS Environmental Services Pty Ltd (AGS) in response to the requirements from the client. This document was prepared for the sole use of the client and/or their appointed agents, the appointed environmental auditor, and/or the regulatory agencies that are directly involved in this project, the only intended beneficiaries of our work. Any advice, opinions or recommendations contained in this document should be read and relied upon only in the context of the document as a whole and are considered current to the date of this document. Any other party should satisfy themselves that the scope of work conducted and reported herein meets their specific needs before relying on this document. AGS cannot be held liable for third party reliance on this document, as AGS is not aware of the specific needs of the third party.

From a technical perspective, the subsurface environment at any site may present substantial uncertainty. AGS cannot be held liable for variations encountered in the scale of future remedial works recommended herein (including soil volumes, costs or consequential losses as a result), as the subsurface is a heterogeneous, complex environment, in which small subsurface features or changes in geologic conditions can have substantial impacts on water and chemical movement. Uncertainties may also affect source characterisation assessment of chemical fate and transport in the environment, assessment of exposure risks and health effects, and remedial action performance if so undertaken.

AGS acknowledges that information has been provided by other parties during the works undertaken herein. AGS cannot guarantee the accuracy or completeness of this information, however no indications were found during this investigation that the information provided to AGS, was false. the client therefore waives any claim against AGS for any loss, claim or liability arising from inaccuracies or omissions in information provided by third parties. AGS's professional opinions are based upon its professional judgement, experience, and training. These opinions are also based upon data derived from the testing and analysis described in this document. It is possible that additional testing and analysis might produce different results and/or different opinions. AGS has limited its investigation to the scope agreed upon with its client. AGS believes that its opinions are reasonably supported by the testing and analysis that have been done, and that those opinions have been developed according to the professional standard of care for the environmental consulting profession in this area at this time. That standard of care may change and new methods and practices of exploration, testing, analysis and remediation may develop in the future, which might produce different results. AGS's professional opinions contained in this document are subject to modification if additional information is obtained, through further investigation, observations, or validation testing and analysis during future assessment or remedial activities.

13.0 References

- Australian Standards AS4482.2 (1999), Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile Substances;
- Australian Standards AS4482.1 (2005), Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-Volatile and semi-volatile compounds;
- Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council (ANZECC/NHMRC) (1992), Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Soils;
- Australian and New Zealand Environment Conservation Council and Agriculture and Resource Management Council of Australia (ANZECC and ARMCANZ) (2000), Australian and New Zealand Guidelines for Fresh and Marine Water Quality;
- EPA Audit EA001147, Environmental Audit Report, 762 – 764 Whitehorse Road, Mitcham, Vic 3132, Maple Auditing Pty Ltd.
- EPA Audit 24294-1, Environmental Audit Report, Former Heatherdale Primary School Site, Micham, Vic, 3121, Sinclair Knight Merz.
- National Environment Protection Council (NEPC) (1999, amended 2013), National Environment Protection (Assessment of Site Contamination) Measure (NEPM);
- Planning Practice Note 30 – Potentially Contaminated Land (2021), Victoria State Government, Environment, Land, Water and Planning;
- Victorian EPA Publication 655 (2009), Acid Sulphate Soil and Rock;
- Victorian EPA Publication 759B (2002, revised 2014), Environmental Auditor (Contaminated Land) Guidelines for Issue of Certificates and Statement of Environmental Audit;
- Victorian Government Gazette No. S245 (2021), Environment Reference Standard.

FIGURES

N

SCALE: METERS
100 200

LEGEND:
Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 01	TITLE: Locality Plan
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Nearmap

N

SCALE: METERS

50 100

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 02	TITLE: Aerial Photograph 1945
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: melbourne.1945

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 03	TITLE: Aerial Photograph 1956
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Landata

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES		TITLE: Aerial Photograph 1962
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Landata

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 05	TITLE: Aerial Photograph 1972
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Landata

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 06	TITLE: Aerial Photograph 1984
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Landata

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 07	TITLE: Aerial Photograph 2009	
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham	
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd	
DRAWN: AR	APPROVED: JH	SOURCE: Nearmap	

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 08	TITLE: Aerial Photograph 2019
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Nearmap

N

SCALE: METERS

30 60

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 09	TITLE: Aerial Photograph 2024	
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham	
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd	
DRAWN: AR	APPROVED: JH	SOURCE: Nearmap	

N

SCALE: METERS

100 200

LEGEND:

Site Boundary

AGS ENVIRONMENTAL SERVICES	FIGURE: 10	TITLE: Surrounding Audited Sites
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Nearmap

N

SCALE: METERS
15 30

LEGEND:
Site Boundary
Soil Bore (SB)

AGS ENVIRONMENTAL SERVICES	FIGURE: 11	TITLE: Soil Bore Locations
PROJ: AGS240210	DOC: AGS240210-R01	LOCATION: 724-728 Whitehorse Road, Mitcham
DATE: 17/07/24	REVISION: 0	CLIENT: Knowles Group Pty Ltd
DRAWN: AR	APPROVED: JH	SOURCE: Nearmap

APPENDIX A

AGS
ENVIRONMENTAL SERVICES

ASBESTOS. GROUNDWATER. SOIL.

Assessing and Managing
your above and below ground risk

STANDARD OPERATING PROCEDURES

AGS Environmental Services Pty Ltd
16/23-25 Gipps Street, Collingwood
Ph: (03) 8528 1480
ABN: 70 599 868 520
www.agses.com.au

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1.0 Introduction

The purpose of this document is to describe the guidelines, standards and investigation methods that are undertaken during the intrusive phases of investigations.

2.0 Data Quality Objectives (DQO)

The National Environment Protection (Assessment of Site Contamination) Measure (2013) (NEPM) and Australian Standard AS4482.1 (2005) recommend that data quality objectives (DQO's) be implemented during the investigation of potentially contaminated sites. This process is adapted from the US EPA *Guidance on Systematic Planning Using the Data Quality Objectives Process* (2006). The purpose of the DQO process is to define the objectives of a site assessment and to allow an appropriate sampling and analysis plan to be developed to meet those objectives. The DQO process is presented in **Table 1.**

Table 1. Data Quality Objectives

Step 1: State The Problem	The objective of the investigation: • Assess the contamination status of the soil and groundwater at the site, and to provide adequate and robust data for the completion of a Statutory Environmental Audit. Contamination issue(s) to be addressed: • The contamination status of soil, groundwater and/or soil vapour. Project Team: • AGS Environmental Services Pty Ltd; • NATA Accredited Laboratories (Eurofins and Envirolab Services); and • Appropriately qualified and experienced sub-contractors (as required).
Step 2: Identify the Decisions/Goals of the Study	Goal of the study: • Characterise the contamination status of soil, groundwater and/or soil vapour at the site, after referring to the site history assessment and identifying Potential Contaminants of Concern (PCoC); • Compare data with regard to acceptable guideline values/screening criteria; • Provide recommendations for further works (if required) for the completion of the Statutory Environmental Audit for the site. Decision Statements: • Should soil concentrations of analytes exceed the adopted assessment criteria, further analysis, assessment and/or appropriate management may be required to be implemented. This may include removal of soils from site, appropriate management (i.e. encapsulation) etc.; and • Should groundwater concentrations of analytes exceed the adopted assessment criteria, further analysis, assessment and/or appropriate management may be required to be implemented. This may include the necessity of a risk assessment, remediation, a groundwater quality management plan (GWMP) or placing the site in a groundwater quality restricted use zone (GQRUZ). • Should soil gas concentrations of analytes exceed the adopted assessment, further assessment and/or appropriate management may be required to implemented. This is include a human health risk assessment or the recommendation for a soil gas mitigation system.

Step 3: Identify the Information Inputs	Media from which samples to be collected from: • Soil, groundwater, and/or soil vapour. Environmental parameters to be measured: • Broad range screen of selected samples; • PCoC, as identified in the site history assessment, conceptual site model (CSM) and appropriate guidelines and regulations (including EPA and NEPM) in selected soil/groundwater and/or soil vapour samples; Site Criteria: • Acceptable assessment criteria, as defined in the report. Analytical Methods: • NATA approved methods and methods endorsed in the NEPM, including all laboratory analysis to be undertaken by those who are NATA registered.
Step 4: Define the Study Boundaries	The boundaries of the site, as well as potential off-site receptors.
Step 5: Develop the Analytical Approach	Parameters of interest: • PCoC, as identified in the site history assessment and appropriate guidelines and regulations (including EPA and NEPM); and • Collection and interpretation of appropriate field parameters. Action Levels: • Acceptable assessment criteria, as defined in the report. Acceptable Error Limits: • Blanks: PCoC should not be detected within blank samples. If they are, an investigation should be undertaken to determine why this is the case; • Recovery of spikes: Recovery of spikes should be within laboratory defined ranges; • RPD for field QC samples: RPDs should be less than 50% for field QC samples; • RPDs for laboratory QC samples: Method blanks should not return any concentrations above detection levels on analysis, and RPDs should be within the appropriate acceptance criteria as stipulated in each laboratory report. Alternative Actions: • Where concentrations of analytes exceed the adopted assessment criteria, and are not attributed to natural background concentrations or indicative of regional contamination, further investigation works/assessment will be undertaken.
Step 6: Specify Performance or Acceptance Criteria	Possible range of the parameter(s) of interest: • Consideration of the possible errors involved in the decision making process and acceptable error limits. Decision errors: • The use of regulatory assessment criteria and following the DQO process, the sampling analysis and quality plan (SAQP) and relevant standards and guidelines attempts to ensure that the works have been adequately conducted to determine the actual contamination status of the site. Null hypothesis: • The site is assumed to be contaminated unless it is proven to be uncontaminated. Possible range of values: • The samples collected are considered to be representative of actual conditions on-site. However, due to the heterogeneity of material (especially site filling), orders of magnitude ranges of concentrations could be expected.
Step 7: Develop the Plan for Obtaining Criteria	Develop a Sampling Analysis and Quality Plan (SAQP) for the subject site.

3.0 Standards and Guidelines

All assessment works will be undertaken in general accordance with relevant guidelines, including, but not limited to:

- API (2005), 'Collecting and Interpreting Soil Gas Samples from the Vadose Zone, A Practical Strategy for assessing the subsurface vapour to indoor air migration pathway at petroleum hydrocarbon sites', American Petroleum Institute, Publication Number 4741, November 2005;
- Australian Standards AS4482.2 (1999), Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile Substances;
- Australian Standards AS4482.1 (2005), Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-Volatile and semi-volatile compounds;
- CRC CARE (2013) Technical Report No. 23, Petroleum hydrocarbon vapour intrusion assessment: Australian guidance;
- Environment Protection Authority NSW, Sampling Design Part 1 – Application, Contaminated Land Guidelines, August 2022, Document Reference 2022P3915;
- Environment Protection Authority NSW, Sampling Design Part 2 – Interpretation, Contaminated Land Guidelines, August 2022, Document Reference 2022P3916;
- Environment Protection Authority VIC, Guidance for the Cleanup and Management of Contaminated Groundwater, July 2021, Publication 2001;
- Environment Protection Authority VIC, Contaminated Land Policy, February 2021, Publication 1915;
- Environment Protection Act 2017 - Authorised Version No. 5, 1 July 2021;
- Environment Protection Regulations 2021, 25 May 2021, S.R. No. 47/2021;
- Industrial Waste Resource Guidelines (IWRG) 702 (2009), Soil Sampling;
- National Environment Protection Council (NEPC) (1999, amended 2013), National Environment Protection (Assessment of Site Contamination) Measure (NEPM);
- State Environment Protection Policy (SEPP) (2002), Prevention and Management of Contamination of Land;
- Victorian EPA Publication 1828.2 (2021), Waste disposal categories – characteristics and thresholds;
- Victorian EPA Publication 668 (2006), Hydrogeological Assessment (Groundwater Quality) Guidelines;
- Victorian EPA Publication 669 (2000), Groundwater Sampling Guidelines;

- Victorian Government Gazette No. S245 (2021), Environment Reference Standard.

This is inclusive of any subsequent revisions of the above.

4.0 Soil Assessment

Soil sampling is undertaken to determine the lithology and potential associated contamination at a site. Particular areas of interest during the soil-sampling program are the fill horizon(s) and the underlying natural material.

The soil sampling reports, including logs of field observations and laboratory analysis of results are presented in the report for the assessment.

4.1 Grid Based Sampling

Typically, a grid-based sampling or similar systematic pattern will be applied to a site when determining sampling points. A square based grid is generally employed when setting out a grid-based sampling array, however other patterns such as herringbone and triangular grids are also acceptable depending upon the shape and dimensions of the site.

The advantages of using a grid-based sampling array are:

- Lack of bias if the first sampling point is determined randomly;
- There is no clustering of sampling points; and
- It is easy to survey the sampling locations.

If deviations from the sampling layout are necessary because of unavoidable obstacles, then sampling locations should be spread fairly evenly across the site as far as practicable.

The determination of the minimum number of sampling points for a given site is dependent on the purpose of soil assessment. For site characterisation purposes, reference to the minimum requirements specified in AS4482.1 (2005) or EPA NSW, Sampling Design Part 1 (2022) should be made.

For the classification of soils for the purposes of off-site disposal, the design of the sampling locations and the number of samples required should conform with IWRG702 (2009).

4.2 Targeted Sampling

Targeted sampling should be applied as an addition to any grid-based sampling design to assess any specific areas of interest. An example of this would be if there was a known oil storage area on-site and the grid-based sampling design does not sample in this location, targeted sampling would be required to assess this potential “hot-spot” or area of interest.

4.3 Validation Sampling

Following the removal of identified areas of contamination (Underground Storage Tanks, contaminated soils, unlined contaminated soil stockpiles, etc) validation sampling is to be utilised to ensure that all contaminated soils have been removed as required.

Typically, validation sampling will require soil samples from each of the walls of the excavation and the floor of the excavation dependent upon the works undertaken.

The rate at which validation samples are required will depend on a number of factors, such as the size of the excavation, nature of the contamination, nature of the source / potential source of contamination and the sensitivity of the site to the identified contamination. Typically validation samples are taken every 5-10 linear metres along walls of excavations and on a 5-10 metre grid along floors. This is not a set value, rather a guide and each project is different. In cases where the site is being audited, consultation with the appointed auditor to determine an appropriate sampling regimen is considered prudent.

4.4 Volatile Organics Screening

Samples collected during a soil assessment shall be screened for the presence of Volatile Organic Compounds (VOC) using a Photo-Ionisation Detector (PID). The PID shall be calibrated **prior** to use as per the manufacturers recommendations. PID samples shall be placed in an airtight container (snap lock-bag) in as undisturbed condition as possible. The size of the sample shall be approximately 1/3 of the total volume of the container. The sample shall be shaken / broken up following sealing of the container and allowed to rest. The PID readings shall then be taken from the air void in the container, taking care not to allow air to escape, and recorded on the environmental log sheets.

4.5 Test Pits

Test pits are the preferred method for soil sampling as they provide a clear and larger scale area for the logging and identification of soil / fill profiles at each sample location. The volume of sample available for collection and analysis is typically not as restricted as in other methods such as auger drilling.

Test pits will typically be undertaken with the assistance of either a backhoe or excavator. Due to occupational health and safety regulations test pits that extend to depths exceeding 1.0m shall not be entered.

Soil sampling of fill and natural materials shall be undertaken directly from the walls of the test pit to a depth of 1.0m. For test pits exceeding a depth of 1.0m, samples shall be sourced from the bucket of the backhoe or excavator. Samples obtained from the bucket should be taken from the centre of any mass brought up from the bucket, to avoid any cross contamination of samples. Clumps of clayey material should have the edges / sides broken off prior to the collection of material to be sampled.

4.6 Stockpile Sampling

For stockpile sampling, where the soil has been shifted and is no longer in-situ, “a 3-dimensional systematic grid sampling design should be applied to account for spatial variability. Surface sampling from the stockpile will not be sufficient to categorise its contents and is not appropriate where volatile

contaminants are present. Sampling should be uniformly distributed throughout the stockpile, including sampling at depth.". Sampling density will be determined in accordance with IWRG702.

Samples should be taken from within the stockpile as surface sampling will not be sufficient to classify the entire stockpile, especially where volatile contaminants are being tested for. Samples should be uniformly distributed throughout the stockpile.

Depending on the stockpile, a shovel may be sufficient to sample the soil. In other cases a hand auger or a backhoe may be required to sample at sufficient depth. All sampling equipment shall be decontaminated between sample locations.

4.7 Surface Sampling (Trowel or Hand Scoop)

Collection of surface soil can be accomplished with tools such as spades, shovels, and by hand. Surface soil can be removed to the required depth with a garden spade, and collect the sample by hand wearing a sterile glove. Accurate, representative samples can be collected with this procedure depending on the care and precision demonstrated by the sample team member. Care should be exercised to avoid the use of devices plated with chrome or other materials.

The following procedures are to be used to collect surface samples:

- Using a pre-cleaned stainless-steel scoop or trowel remove vegetation and top layer of soil, then loosen the desired volume of soil from the sampling area;
- Transfer the discrete grab sample into an appropriate sample container;
- For composite sample, homogenize grab samples in a stainless steel or glass-mixing container using the appropriate tool (stainless steel spoon, trowel, or pestle);
- Secure the cap tightly. Chemical preservation of solids is generally not recommended;
- Label and tag sample containers, and record appropriate data on soil sample data sheets (depth, location, color, other observations); and
- Follow required sampling preservation and equipment decontamination procedures.

4.8 Hand Auguring and Split Spoon Sampling

The following outlines the procedures used when sampling with a hand auger and split spoon:

- Attach the auger bit to a drill extension rod, then attach the "T" handle to the drill extension rod;
- Clear the area to be sampled of any surface debris;
- Begin auguring, periodically removing any accumulated soil from the auger bucket;
- After reaching the desired depth, slowly and carefully remove the auger from boring;

- Screw the split spoon head onto its steel driver and hammer into the bottom of the bore hole until the split spoon head is believed to have reached its terminal depth;
- Pull out the split spoon head and open the halves of the split spoon to retrieve the sample;
- Transfer sample into an appropriate sample or homogenization container; and
- Follow previously specified sample preservation and decontamination procedures.

4.9 Mechanical Auguring (Solid Flight and Hollow Flight Augers)

Mechanical auguring provides an acceptable alternative to test pits, however it is not recommended for where volatile contaminants are considered to be primary contaminants of concern.

4.10 Push Tube / Geoprobe Sampling

Push tube sampling provides an acceptable alternative to test pits in confined or cost prohibiting situations (i.e. reinstatement of asphalt following a test pit). The use of push tube sampling provides a relatively undisturbed core of soil / fill allowing the detailed logging and sampling of the strata encountered.

A Geo-Probe (small scale drilling rig) is typically used to undertake the push tube sampling due to its size and power. A single use, clear PVC tube is inserted inside the drill string, the drill string is pushed / hammered into the ground by the drilling rig. The sample slides up the inside of the clear PVC tube through the open conical head of the drill string.

The drill string head is decontaminated using the previously described method between each hole.

The clear PVC tubing is removed from the drill string between each run (1 – 1.5 m in length), and split for logging and sampling purposes.

The logging of the physical characteristics of the strata is undertaken with care not to cause any cross contamination across the length of the sample (i.e. latex / nitrile glove to be worn, and minimising the amount of handling of the samples).

Push probes will continue to a depth where refusal occurs or it is clearly identified that the strata is undisturbed natural, unless otherwise stated in the scope of works for a given project.

5.0 Groundwater Assessment

There are no standards that govern the location, number and distribution of groundwater sample points. The number and location of groundwater sampling points is generally a function of the findings of the PSI which would identify potential source points of groundwater contamination. At a minimum, a single groundwater monitoring well in the centre of the site will provide data as to the groundwater conditions directly beneath the site at that point in time. In order to establish a groundwater gradient direction, three groundwater locations are required to triangulate depth measurements. If no source points of contamination have been identified, these three locations should be positioned in a broad triangular array.

If a source point of groundwater contamination has been identified, such as an Underground Storage Tank (UST), a groundwater well should be installed either directly through the location, or else immediately down gradient. An inference as to groundwater flow direction based on site topography and regional drainage would need to be established prior to bore installation.

5.1 Groundwater Monitoring Well Installation

Groundwater monitoring wells are installed for the purposes of groundwater monitoring, aquifer testing and groundwater sampling.

Figure 1 depicts a typical monitoring well installation. Each well consists of a 50 mm internal diameter standpipe, constructed from Class 18 high durability unplasticised polyvinyl chloride (UPVC). The length of the screened interval in the well should be between 2m and 3m and located specifically within the zone of interest. Longer screens may result in dilution of groundwater samples due to mixing, resulting in unrepresentative samples. High-resolution sampling may require screen lengths less than 1 m in length. Slotting for the screen is nominally 0.5 to 1.0 mm width, with an average spacing of 10 mm between slots. The ends of the casing and screen lengths are threaded to avoid the use of solvent-based glues and cements.

The screened interval should be placed so that it extends approximately 1 m above the saturated zone of the aquifer. This ensures that any LNAPL present is able to enter the well and to accommodate future groundwater level fluctuations. Samples of dissolved phase contaminants cannot generally be obtained from wells with LNAPLs due to free phase contamination of the sample, however, water can be sampled below the influence of the LNAPL if only to identify the constituency of contaminants present. When the screened interval is outside the direct influence of LNAPLs it may also be possible to sample the well for dissolved phase.

In some situations, a bore sump may be required to either allow the sampling for dense non-aqueous phase liquids (DNAPLs) or to act as a sediment trap. Sumps are placed below the screened interval and are constructed of approximately 0.5-1.0m length of blank casing with an end cap. It is good practice to ensure that the sump is then encased in bentonite to mitigate any potential downward pathways for DNAPL which may be present surrounding the well.

Standpipes are fitted with UPVC end caps at the lower and upper ends. The end cap at the lower end of the standpipe is generally fastened using pop rivets or stainless steel self-tapping screws. Where well security is required a lockable cap is used on the upper end of the standpipe.

Materials placed into boreholes should be free from contaminants targeted in the investigation. Decontamination of well materials should be performed. Decontamination procedures comprise the removal of encrusted material, high pressure water scrubbing using laboratory grade detergent (Decon90), rinsing with water of potable quality and finally rinsing with deionised water.

Where it is anticipated that significant contamination or free product will be intercepted in a shallow aquifer during the drilling of a borehole for the purposes of installing a well in a deep aquifer, specific staged drilling and bore construction techniques are considered necessary. This involves the drilling and emplacement of a grout plug to a depth below the product layer or shallow aquifer. Once the grout has set, a smaller diameter borehole is then drilled through the grout plug to the required final depth. It is

imperative that the minimum well thickness of the grout plug is at least 20 mm. To facilitate this thickness and the installation of the monitoring well, it may be necessary to ream the first stage of the borehole to an increased diameter before emplacing the grout plug.

The following procedures are to be adhered to during the installation of groundwater monitoring wells:

- Attach a sump to the base of the screen if required or line the base of the hole with sand first;
- In conditions where the borehole will remain open the total depth of the borehole is confirmed once the drilling tools have been removed. When installing a monitoring well in an open borehole, centralisers are attached to the standpipe every six to twelve metres;
- In conditions of poor borehole stability (prone to slumping and collapse) the standpipe is installed through the drilling tool. Centralisers are not required when installing through drilling tools;
- Once the screen and standpipe have been installed, a filter consisting of prewashed graded sand of nominal 2-3 mm size is immediately placed around the standpipe to a height of between 300 and 500 mm above the uppermost screen slots;
- If the well is being constructed through drilling tools the tools are withdrawn as the sand is poured to prevent caving of the formation surrounding the well. When the tools are being withdrawn it is ensured that the standpipe does not vary from its emplaced position in the borehole;
- A bentonite seal is placed directly above the filter pack with a minimum thickness of 500 mm;
- The bentonite pellets are poured into the annulus very slowly to prevent bridging. Where the bentonite seal is placed above the water table, then approximately 20 L of clean water is added to the borehole in order to begin the hydration of the bentonite. Cement/bentonite mixtures are used in saline waters;
- Boreholes are backfilled above the bentonite seals with a bentonite/cement grout to approximately 0.3m below ground level;
- Final completion of the monitoring well involves construction of a concrete collar seal that may incorporate a steel protective cover. The cover is lockable to secure the well; and
- Drainage around the bore head is provided to avoid build-up of surface water and leakage down the side of the standpipe.

Groundwater monitoring wells are surveyed for location and elevation upon completion. Where necessary, the location is determined to the nearest 0.1m and referenced to AMG, MGA, or Site grid coordinates.

Elevation measurements of the top of the standpipe and ground surface adjacent to the standpipe are determined to the nearest 0.01m and referenced to an arbitrary datum selected on site or to the Australian Height Datum (AHD).

Records of procedure adopted, materials used, and the progress of the stages of well construction are kept. Information will also be recorded on the monitoring well configuration (i.e. screen location, casing length etc.) placement of sand filters and well seals, and general completion details.

5.2 Groundwater Monitoring Well Development

Following installation, the wells are developed. This involves removal of fluids that may have been introduced during drilling operations, fines from the sand filter and screens, and fine sand, silt and clay from the aquifer around the well screen. Development of a well is performed after the installation of the well and at least 24 hours to seven days prior to sampling. Decontamination of all equipment used in well development is performed as described previously.

Development is undertaken by either pumping or bailing the groundwater from the well. The development process actively agitates the water column in the bore and continues until the water being removed is visibly clean, the well is dewatered, or a minimum of 3 times the well volume has been removed. The development process does not introduce air, water or other material into the aquifer. Qualitative measurement of sediment in removed development water may be accomplished by visual inspection of the settable solids in the bottom of a container of known volume. All water removed during development is disposed of in accordance with environmental best practice.

5.3 Groundwater Monitoring Well Purging

Immediately prior to sampling groundwater from a monitoring well, it is necessary to purge the well. The aim of the purging process is to remove the stagnant water that remains in a well between sampling rounds, while creating minimal disturbance to the groundwater flow regime. Upon completion of the purging process, it is then possible to collect groundwater samples that are representative of the aquifer.

Traditional purging techniques have involved the removal of water until the stabilisation of basic water chemistry parameters (including pH, DO, EC, ORP and temperature) to within acceptable tolerance ranges has been achieved. The purging of groundwater wells must be undertaken in accordance with the guidelines detailed in EPA Bulletin 669, Groundwater Sampling Guidelines (2000).

The following procedures are to be adhered to during the low flow / minimal drawdown purging of groundwater wells:

- When there are numerous wells to be sampled, the purging and sampling procedure is to be undertaken in a progression from the least to most contaminated groundwater well, if this is known. Alternatively, the purging and sampling order should be undertaken from up gradient wells to down gradient wells;

- The well, lock and the locking cap are to be checked for damage. Observations should be noted;

- Upon removal of the well locking cap, the presence of volatile organic compounds (VOC's) in the monument (well protector) headspace should be immediately measured with a Photo-Ionisation Detector (PID) and the reading noted. Similar measurements for VOCs should also be taken in the well standpipe once the bore cap is opened (if present);

- Measure and record the depth to the standing water level in the well standpipe relative to the reference marker at the top of the well casing. The thickness of any LNAPLs floating on the standing water must be measured if present;

- Carefully and slowly lower the pump into the well so that the intake is located in the middle or slightly above the middle of the screened interval. Placement of the intake near the top of the water column is only recommended when the screen has been placed across the water table in an unconfined aquifer and this is the target sampling point. The placement of the pump within 0.6 m of the base of the well is to be avoided as this may cause disturbance of sump deposits;

- Pump the groundwater from the well using low-flow rates (<0.5 L/min) to maintain minimal drawdown in the well (<0.1 m change in the standing water level). Make appropriate adjustments to the pump to stabilise the required flow rate as soon as possible. Accurately determine the flow rates using a stopwatch and graduated container; and

- Contain discharged water in a flow cell momentarily whilst water chemistry parameters are measured. Measure and record the standing water level and the physical parameter readings at intervals of three to five minutes until the physical parameters have stabilised.

5.4 Groundwater Sampling

Groundwater sampling will generally, though not exclusively, involve the use of boreholes or wells. A monitoring well makes it possible to sample a very small part of an aquifer, horizontally and in many cases vertically. This means that careful thought must be given to the location of sampling points in relation to hydrogeology of the site and local area in addition to potential sources of contamination (if the purpose of the well is to identify potential groundwater contamination).

The following procedure must be adhered to during groundwater sampling:

- Ensure that appropriate PPE is used including disposable gloves, eye protection and tyvek suit (if appropriate).

- The flow cell is disconnected prior to sample collection.

- Groundwater samples are collected at the sump or slightly lower flow rate used during purging and such that the maximum allowable drawdown of 0.1m is not exceeded. A sufficient flow rated is used to prevent cascading and/or air bubble formation in the sampling device tube line.

- The sample containers for volatile and gas sensitive analytes are filled first. Bottle for inorganic analytes can be filled in any order.

- Turbulent filling of sample bottles is avoided. The bottles are filled so as to almost overflow to exclude air bubbles prior to firmly screwing on the container cap. Care should be taken to not excessively overfill the bottles as this may dilute any preservatives used.

- Relevant sampling data is recorded on Groundwater Well Purging and Sampling Sheets. Such information includes sample identification number, sample type, a description of the groundwater, and the number and type of sample containers filled.

- After the collection of the samples, the pump and tubing are removed from the well. The tubing, unless permanently installed, must either be disposed of in accordance with environmental best practice.
- The well depth is measured and recorded on the Groundwater Well Purging and Sampling sheet;
- To prevent cross contamination of samples, decontamination of all reusable equipment used shall be undertaken between each sampling. A new PVC bladder shall be installed in the micro-purge pump between each sampling. New latex/nitrile gloves shall be worn for each sampling event.
- Close and lock (if applicable) the well after sampling is completed.

5.4.1 Filtration of Groundwater Samples

Filtration is a form of preservation and involves passing the groundwater sample through a filter to remove suspended solids. Filtration permits the determination of soluble constituents or the determination of contaminants associated with suspended matter (eg metals and hydrophobic contaminants sorbed onto suspended particles). Though filtration should not be considered as a 'fix' for poor purging and sampling practices it may, however, be necessary where it is not possible or practical to otherwise obtain a sample with low turbidity.

When filtration of a sample is required, the following guidelines are incorporated into the sampling procedure:

- Filtration occurs immediately after the collection of the sample and before chemical preservation (acidification);
- Filtration is undertaken using gravity or by applying a vacuum or pump pressure. Only low pressures are applied;
- Filtering is typically performed using filters with a pore size of 0.45 μm. Smaller pore size filters such as 0.1 μm may also be used.
- Filters and filtering devices are cleaned in a similar manner to sample containers, and care is taken to ensure that contamination is not introduced in the field; and
- On-site (between samples) final rinses from filtration equipment should be also submitted to the laboratory as 'rinsate blanks' for analysis.

If field filtration is not possible, laboratory filtration will be required, as follows:

- Collect the unfiltered sample in an appropriate container that has no preservatives;
- Overfill and immediately seal the sample container;
- Cool the sample and transport to the laboratory with minimum delay; and

- Inform the laboratory of the need to filter the sample to the appropriate pore size, immediately upon receipt. The laboratory should be pre-advised that they are being sent samples that have not been field filtered.

5.4.2 Sample Collection in the Event of Free Product (LNAPL)

In the event that free product (LNAPL) is detected when the standing water level is measured prior to purging, a sample of the LNAPL can be obtained using the following procedure:

- The well is not purged prior to collection of the free product LNAPL sample;
- A sample of the free product LNAPL is collected using either a single or double check valve (transparent) bailer;
- Based upon the depth to the free product and the standing water level, the bailer is gently lowered to a depth so that the bailer bridges both the air/free product and the free product/water interfaces. The bailer is then removed;
- The product/water interface is observed prior to draining the water from the bailer. The sample of free product is collected from the bailer once the water has been drained.

5.5 Slug Tests

The hydraulic conductivity of aquifers can be assessed through the undertaking of slug tests on groundwater monitoring wells.

AGS acknowledges that there are limitations to undertaking slug tests and applying the findings across an entire site. However, the limitations that slug testing offers is considered to be acceptable. Limitations of slug tests are primarily that:

- Only a small portion of the aquifer adjacent to the GMW is evaluated;
- Do not provide an evaluation of portions of the aquifer not screened by the GMW being tested; and
- The results may be influenced by well casing materials in the GMW adjacent to the well screen.

The testing procedure for slug testing is as follows:

A transducer is submerged to the base of the GMW and allowed to thermally equilibrate for approximately 5 minutes. The bailer is then gently lowered into the GMW and submerged fully. The water within the GMW is given 5 minutes to stabilise. The bailer is then immediately removed from GMW, “instantaneously” removing 1 litre of water from the GMW. Measurements of the groundwater level rebound are recorded at 5 second intervals for approximately 4 hours.

6.0 Soil Vapour Sampling

Presently, no standards govern the location, number and distribution of soil vapour sample points. However, AGS considers that CRC Care (2013) currently provides the necessary framework in which to undertake a soil vapour assessment.

Table 4 of CRC Care (2013) provides guidance on the number of soil vapour bores required at a site under different scenarios and whether or not buildings are present, or are planned to be constructed, at the site.

The soil vapour assessment methodology is summarised below.

6.1 Soil Vapour Well Selection

A number of factors can determine the type of a soil vapour well bore installed. Firstly, it must be determined where the soil vapour data is to be collected. For example, if a site is planned to have a 5m basement, then it is wise to target soil vapour at a depth commensurate with the proposed basement depth. If the site is not going to be excavated and there is a concrete capping across the site, the installation of soil vapour pins may suffice.

6.2 Soil Vapour Bore Installation

A soil vapour bore is installed where soil gas analysis is targeted at a certain depth. The procedure for installation is as follows:

- Progress borehole to the required depth. This may be undertaken by hand auger for depths of less than 1.5m, or by a mechanic drill rig;
- If the bore depth does not allow for inspection of the base of the bore, a water level indicator should be used to determine if water is present in the borehole and to what depth. If perched water or groundwater is encountered, the hole should be abandoned and the bore both re-located nearby and installed to a lesser depth which does not intersect the sub-surface water;
- Approximately 100mm of washed sand is then emplaced in the base of the borehole;
- Prior to installation, the stainless steel soil vapour probe is to be attached to an appropriate amount of Teflon tubing such that the tubing extends 350mm longer than the borehole is deep;
- The vapour probe is then lowered by the Teflon tube to rest upon the washed sand at the base of the borehole;
- Washed sand is then poured into the borehole covering the vapour probe and extending 100mm above the top of the vapour probe;
- Approximately 100mm of dry bentonite chips are then to be emplaced on top of the sand, followed by 100mm of moderately hydrated bentonite chips;
- The hole should then be grouted either to the surface if less than 2m, otherwise with at least 2m of grout. The grout is then capped with a further 100mm of bentonite;

- A Teflon cap should then be placed over the exposed Teflon tube.

A diagrammatic representation of a typical soil vapour bore cross section is presented in **Figure 2**.

6.3 Soil Vapour Pin Installation

A soil vapour pin can be utilised where the site is capped with a competent concrete slab and soil vapour testing targets immediate sub-slab vapours. The procedure for installation of a vapour pin is as follows:

- Set-up a wet/dry vacuum to collect drill cuttings;
- First drill a 1.5 inch diameter hole into the concrete with an appropriate hammer drill, at least 3cm into the slab;
- Through the middle of this hole then drill a 5/8 inch diameter hole through the remainder of the concrete slab and at least 3cm into the underlying soils to form a void;
- Remove drill bit and removed loose drill cuttings with the vacuum;
- Assemble the vapour pin by covering one half of the lower half of the brass or stainless steel pin with a silicone sleeve;
- Place the lower end of the vapour pin into the drilled hole and tap into place using a dead blow hammer with the extraction / installation tool;
- The silicone sleeve will form a slight bulge between the slab and the vapour pin shoulder;
- Once the vapour pin is emplaced, cover the exposed barb with the protective cap and secure the flush mount cover.

6.4 Soil Vapour Sampling

Sampling of the soil gas should generally be undertaken at least 7 days following installation to allow for equilibration. AGS Environmental Services currently outsources sampling of soil gas, however, the choice of sampling methodology is within the AGS remit. Quantitative sampling of soil gas is generally undertaken by one of three main methods:

- Charcoal Tube: This sampling methodology is useful where high levels of volatile compounds are expected. The disadvantage of this methodology is that laboratory detection limits are quite high and low level volatile detection is not catered for;
- Thermo-Tube: This sampling methodology is useful where anticipated concentrations of volatiles are within the saturation limit of the thermo tube. The disadvantage of this methodology is that if these limits are exceeded, analysis of the thermo tube is unlikely to be useful;
- Summa Canister: This sampling methodology is good for soil vapour bores where anticipated concentrations of volatiles are low as detection limits are quite low, however if the sampled soil gas contains high levels of volatiles, this can raise detection limits of all analytes and render the results unviable. Sampling with a Summa Canister requires a Helium Leak Check prior to

sampling, in accordance with Eurofins In-House Method LTM-AIR-1010_R0. This involves the placement of a shroud over the vapour probe. Shrouds are enriched with Helium and the vapour probes monitored using a helium detector prior to canister sampling.

7.0 Sample Handling & Documentation

7.1 Recommended Sample Containers & Preservation

AGS preferred sample containers and sample preservation protocols are based on standard methods published by the USEPA (Ref 1) and APHA (Ref 3). Some laboratories may provide a variation based on their analytical methodology.

The recommended common container volumes and type are detection limit dependent. Liaison with laboratory will be required where very low detection limits or where analytes are not listed.

7.2 Sample Labelling

Samples recovered from a site are labelled using a waterproof indelible marker. The following information is the minimum amount of information recorded on a sample label:

- Sample identification code;
- Job Number;
- Sample date & time;
- Initials of person(s) collecting the sample.

7.3 Sample Transfer / Chain of Custody (CoC)

AGS Chain of Custody (CoC) forms are used for each group of samples as per AS4482.1 (2005). The following information is clearly written on each CoC:

- Job number;
- Samplers name;
- Date sampled;
- Laboratory address
- Date delivered to the laboratory;
- Name of person relinquishing sample control to the laboratory or courier including date and time;
- Name of person receiving samples from AGS;
- All subsequent changes in sample control to sub-contracted laboratories;

- Sample identification code;
- Sample type (ie.water sample, soil sample, composite air sample);
- Analysis requested;
- Sample preservation; and
- Laboratory turnaround time.

When the laboratory or courier takes custody of the sample, the CoC should be signed by the consultant and the recipient.

8.0 Quality Assurance and Quality Control

Step 5 of the DQO process outlines the error limits that are considered to be acceptable in order to determine whether data is suitable for interpretive use and to meet the project objectives.

The aim of a QA/QC program is to deliver data that is representative of what is sampled; that is, precise, accurate and reproducible. The approach is generally based on guidance from the following sources:

- Australian Standards AS4482.1 (2005);
- National Environment Protection Measure (NEPM) (1999, amended 2013), Assessment of Site Contamination;
- United States Environmental Protection Agency (USEPA) (2000), Guidance on Systematic Planning Using the Data Quality Objectives Process EPA QA/G-4; and
- United States Environmental Protection Agency (USEPA) (2002), Guidance on Environmental Data Verification and Data Validation EPA QA/G-8.

Laboratories utilised by AGS are NATA accredited for the specified analytical methods requested and have appropriate internal quality controls to ensure that the data produced is also accurate and repeatable.

8.1 Field Duplicate Samples

A blind duplicate, or intra-laboratory duplicate, is taken from the same sampling point as the identified primary sample for soil, groundwater or soil vapour works. The samples are obtained simultaneously with both of them submitted to the primary laboratory (Eurofins). Only AGS is aware of which sample has been replicated. The blind duplicate is sued to assess repeatability (precision) at the primary laboratory.

A split duplicate, or inter-laboratory sample, is obtained using the same methodology as the blind duplicate. The split duplicate is submitted to a second laboratory (Envirolab) to assess accuracy of the primary laboratory.

Split samples are obtained at a ratio of 1 for every 20 primary samples collected.

RPD values for duplicate samples are calculated using the formula:

$$RPD\ \% = \left(\frac{Result\ No.1 - Result\ No.2}{Mean\ Result}\right) \times\ 100$$

In accordance with AS4482.1 (2005), RPD values should not exceed 30-50%, however variations can be expected for organic analytes and for lower concentrations. AGS considers those duplicate samples with an RPD of between 0 to 50% to have acceptable correlation.

8.2 Trip and Rinsate Blank Samples

Two types of field blanks are used, method (or trip) blanks and rinsate (wash) blanks.

Rinsate blank samples are taken during sampling events in order to determine whether cross contamination has occurred between sampling locations due to insufficient cleaning of equipment. Rinsate blanks are collected by running deionised water through cleaned reusable sampling equipment into sampling containers. The samples are then analysed for the key contaminants of concern. Rinsate blanks are generally obtained at a ratio of 1 sample for every day of sampling.

Trip blanks are samples of contaminant free media (water, soil or air) carried to the field unopened and submitted for analysis with the environmental samples. Field blanks are used to identify laboratory errors or to document post-sampling contamination of the samples by volatile organic contaminants. Generally one QC trip blank sample is collected and analysed per sample transport container.

8.3 Internal Laboratory Control

Primary analysis is generally completed by Eurofins Pty Ltd and split samples are analysed by Envirolab Pty Ltd. Both laboratories are accredited by NATA for the methods used. Sample details are sent to each laboratory and the requested analysis is detailed in the chain of custody documentation.

The issued laboratory reports include details of surrogates and spikes used, percent recoveries of surrogates and spikes used, the instrument detection limits, the method detection limits, the practical quantification limits and the reference samples results.

8.4 Laboratory Limits of Reporting

The Practical Quantifiable Limits (PQLs) or Limit of Reporting (LOR) as designated by the analytical laboratory is determined by the test method and the quality of the extraction obtained from samples. In cases where the quality of the extraction is poor due to elevated concentrations of contaminants within a contaminant group are present, it may become necessary for the laboratory to further dilute the extraction.

In some cases, the PQLs can be higher than the adopted criteria. In these situations, it is difficult to successfully predict if the contamination is of acceptable level. Conclusions are therefore drawn on the basis of previous samples, contaminant trends and identified contaminants of concern.

8.5 Equipment Calibration

Field measuring instruments including methane or natural gas detectors, photoionization detectors, field gas chromatographs, pH meters, EC meters, etc each have a logbook for calibration purposes.

The logbook contains the calibration procedures and a register to document the time, date, place, calibrant and person performing the field calibration. Logbook entries are written in ink.

Field measuring instruments are calibrated at least once per day during use and more often if instrumental drift problems are known to occur (as for the Gastech methane detector on the ppm scale). Instrumental maintenance, performed by the manufacturer or by AGS, is documented in the logbook.

9.0 References

- API (2005), 'Collecting and Interpreting Soil Gas Samples from the Vadose Zone, A Practical Strategy for assessing the subsurface vapour to indoor air migration pathway at petroleum hydrocarbon sites', American Petroleum Institute, Publication Number 4741, November 2005;
- Australian Standards AS4482.2 (1999), Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile Substances;
- Australian Standards AS2159 (2009), Piling – Design and Installation;
- Australian Standards AS4482.1 (2005), Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-Volatile and semi-volatile compounds;
- Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council (ANZECC/NHMRC) (1992), Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Soils;
- Australian and New Zealand Environment Conservation Council and Agriculture and Resource Management Council of Australia (ANZECC and ARMCANZ) (2000), Australian and New Zealand Guidelines for Fresh and Marine Water Quality;
- American Petroleum Institute (2005), Publication Number 4741 - 'Collecting and Interpreting Soil Gas Samples from the Vadose Zone, A Practical Strategy for assessing the subsurface vapour to indoor air migration pathway at petroleum hydrocarbon sites'.
- CRC CARE (2013) Technical Report No. 23, Petroleum hydrocarbon vapour intrusion assessment: Australian guidance;
- Environment Protection Authority NSW, Sampling Design Part 1 – Application, Contaminated Land Guidelines, August 2022, Document Reference 2022P3915;
- Environment Protection Authority NSW, Sampling Design Part 2 – Interpretation, Contaminated Land Guidelines, August 2022, Document Reference 2022P3916;
- Environment Protection Authority VIC, Guidance for the Cleanup and Management of Contaminated Groundwater, July 2021, Publication 2001;
- Environment Protection Authority VIC, Contaminated Land Policy, February 2021, Publication 1915;
- Environment Protection Act 2017 - Authorised Version No. 5, 1 July 2021;
- Environment Protection Regulations 2021, 25 May 2021, S.R. No. 47/2021;
- Industrial Waste Resource Guidelines (IWRG) 702 (2009), Soil Sampling;
- National Environment Protection Council (NEPC) (1999, amended 2013), National Environment Protection (Assessment of Site Contamination) Measure (NEPM);

- State Environment Protection Policy (SEPP) (2002), Prevention and Management of Contamination of Land;
- Victorian EPA Publication 1828.2 (2021), Waste disposal categories – characteristics and thresholds;
- Victorian EPA Publication 668 (2006), Hydrogeological Assessment (Groundwater Quality) Guidelines;
- Victorian EPA Publication 669 (2000), Groundwater Sampling Guidelines;
- Victorian Government Gazette No. S245 (2021), Environment Reference Standard.

APPENDIX B

PROPERTY REPORT

Energy, Environment and Climate Action

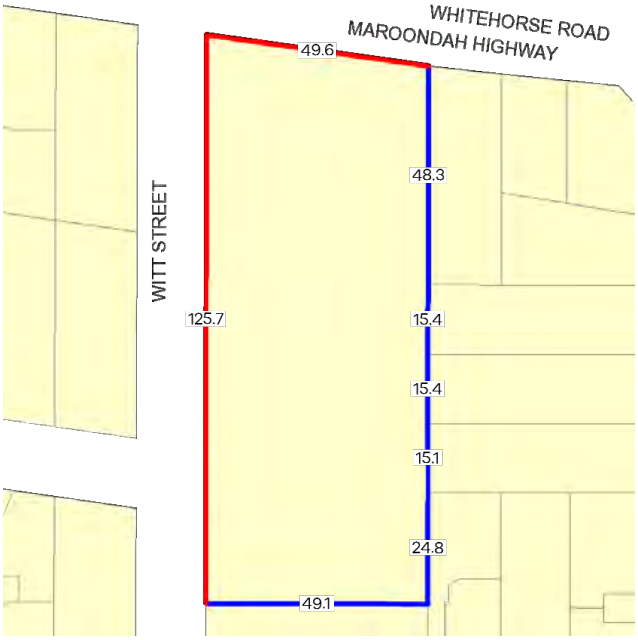
From www.land.vic.gov.au at 17 June 2024 07:44 AM

PROPERTY DETAILS

Lot and Plan Number:	**Lot 1 PS448313**
Address:	**724-728 WHITEHORSE ROAD MITCHAM 3132**
Standard Parcel Identifier (SPI):	**1\PS448313**
Local Government Area (Council):	**WHITEHORSE** www.whitehorse.vic.gov.au
Council Property Number:	**254057**
Directory Reference:	**Melway 49 C9**

SITE DIMENSIONS

All dimensions and areas are approximate. They may not agree with those shown on a title or plan.



Area: 6004 sq. m
Perimeter: 343 m
For this property:
— Site boundaries
— Road frontages

Dimensions for individual parcels require a separate search, but dimensions for individual units are generally not available.

Calculating the area from the dimensions shown may give a different value to the area shown above

For more accurate dimensions get copy of plan at Title and Property Certificates

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Melbourne Water Retailer:	**Yarra Valley Water**
Melbourne Water:	**Inside drainage boundary**
Power Distributor:	**UNITED ENERGY**

STATE ELECTORATES

Legislative Council:	**NORTH-EASTERN METROPOLITAN**
Legislative Assembly:	**RINGWOOD**

PLANNING INFORMATION

Property Planning details have been removed from the Property Reports to avoid duplication with the Planning Property Reports from the Department of Transport and Planning which are the authoritative source for all Property Planning information.

The Planning Property Report for this parcel can found here - Planning Property Report

Planning Property Reports can be found via these two links
Vicplan https://mapshare.vic.gov.au/vicplan/
Property and parcel search https://www.land.vic.gov.au/property-and-parcel-search

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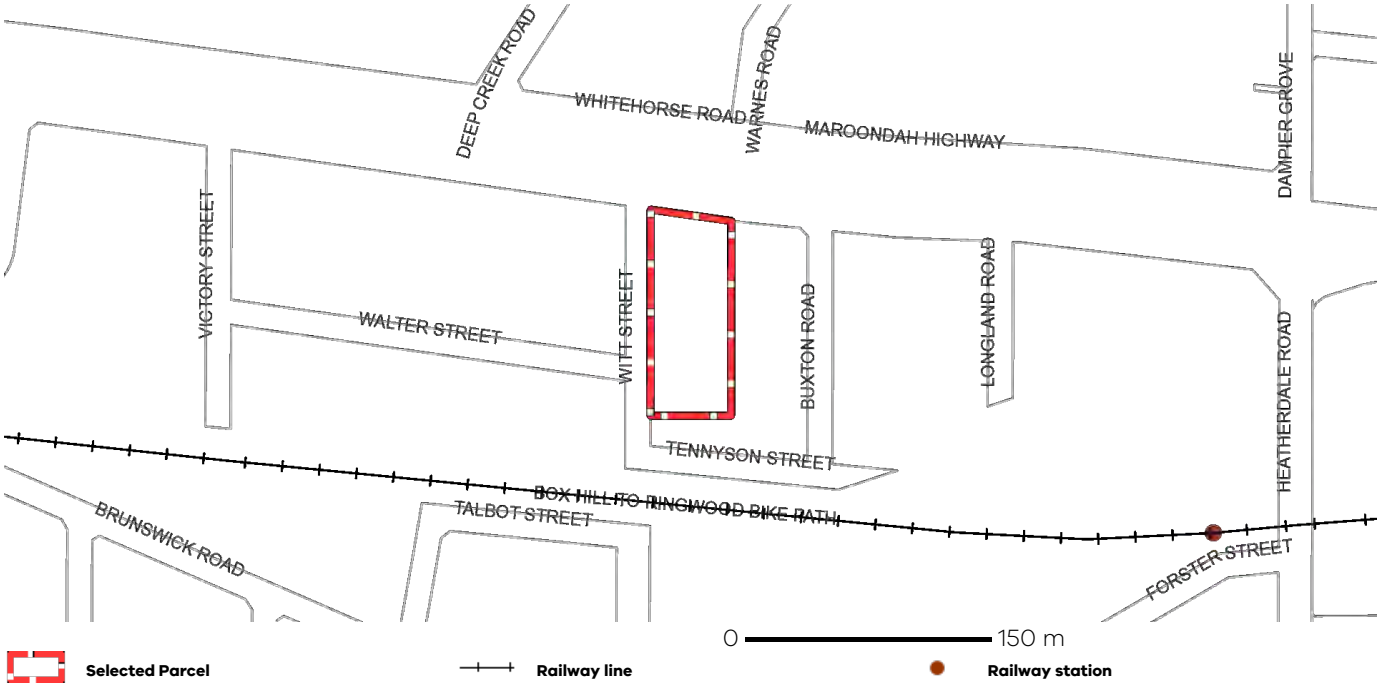
PROPERTY REPORT

Energy, Environment and Climate Action

Area Map



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PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

From www.planning.vic.gov.au at 17 June 2024 07:45 AM

PROPERTY DETAILS

Address:	**724-728 WHITEHORSE ROAD MITCHAM 3132**
Lot and Plan Number:	**Lot 1 PS448313**
Standard Parcel Identifier (SPI):	**1\PS448313**
Local Government Area (Council):	**WHITEHORSE** www.whitehorse.vic.gov.au
Council Property Number:	**254057**
Planning Scheme:	**Whitehorse** Planning Scheme - Whitehorse
Directory Reference:	**Melway 49 C9**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Melbourne Water Retailer:	**Yarra Valley Water**
Melbourne Water:	**Inside drainage boundary**
Power Distributor:	**UNITED ENERGY**

STATE ELECTORATES

Legislative Council:	**NORTH-EASTERN METROPOLITAN**
Legislative Assembly:	**RINGWOOD**

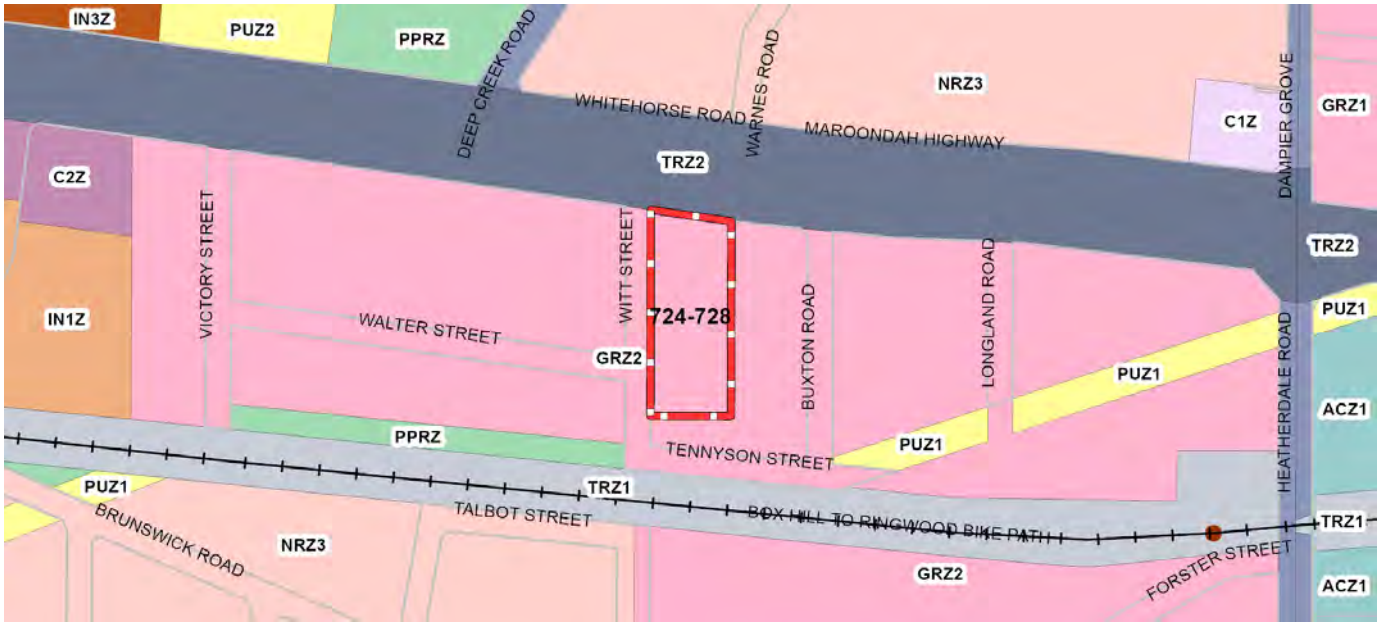
OTHER

Registered Aboriginal Party: **Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation**

View location in VicPlan

Planning Zones

GENERAL RESIDENTIAL ZONE (GRZ) (WHITEHORSE)
GENERAL RESIDENTIAL ZONE - SCHEDULE 2 (GRZ2) (WHITEHORSE)



ACZ - Activity Centre	C1Z - Commercial 1	C2Z - Commercial 2
GRZ - General Residential	IN1Z - Industrial 1	IN3Z - Industrial 3
NRZ - Neighbourhood Residential	PPRZ - Public Park and Recreation	PUZ1 - Public Use-Service and Utility
PUZ2 - Public Use-Education	TRZ1 - State Transport Infrastructure	TRZ2 - Principal Road Network
TRZ3 - Significant Municipal Road	Railway line	Railway station

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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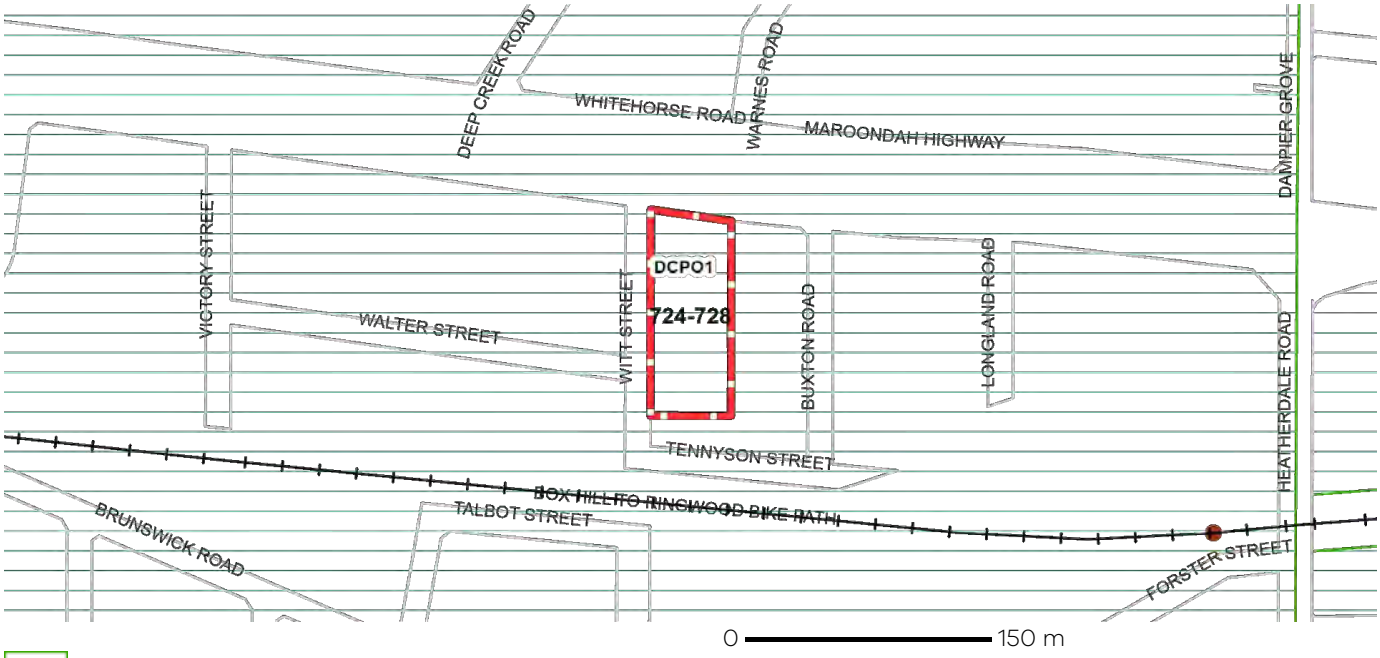
PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Planning Overlays

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY (DCPO) (WHITEHORSE)

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 1 (DCPO1) (WHITEHORSE)



DCPO - Development Contributions Plan Overlay **Railway line** **Railway station**

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

ENVIRONMENTAL AUDIT OVERLAY (EAO) (WHITEHORSE)

EAO - Environmental Audit Overlay **Railway line** **Railway station**

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

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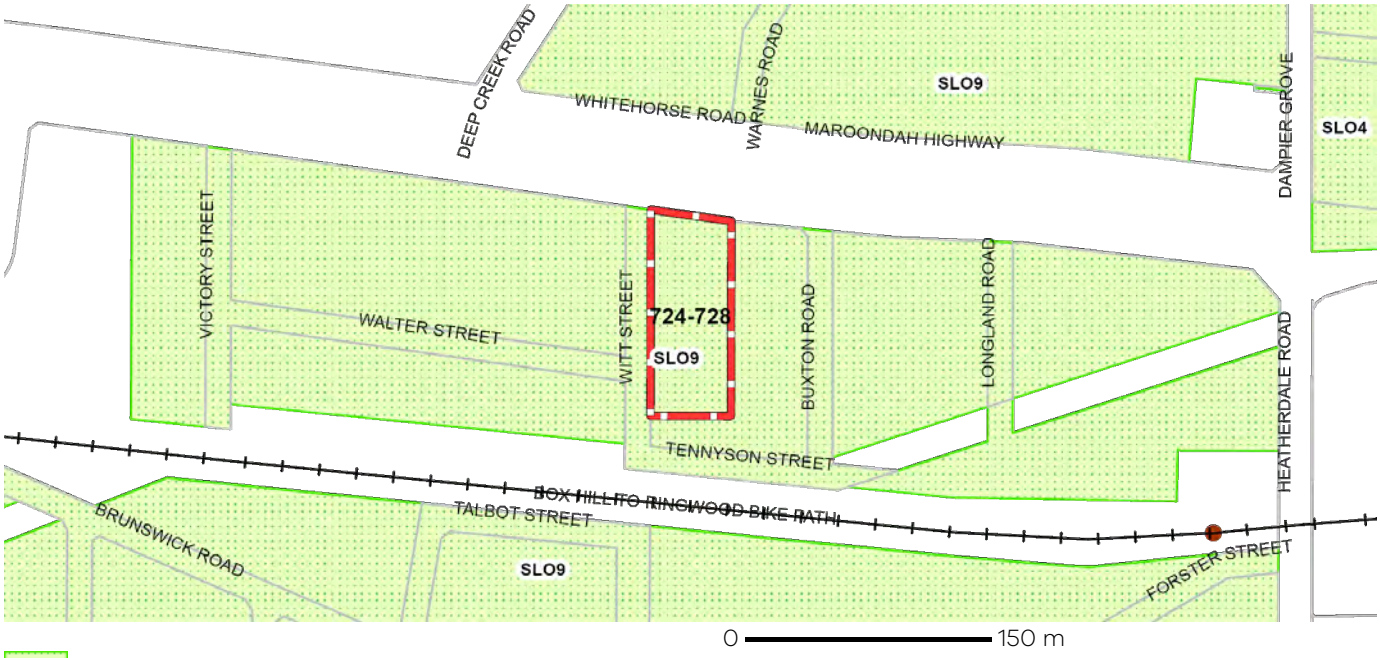
PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Planning Overlays

SIGNIFICANT LANDSCAPE OVERLAY (SLO) (WHITEHORSE)

SIGNIFICANT LANDSCAPE OVERLAY - SCHEDULE 9 (SLO9) (WHITEHORSE)



SLO - Significant Landscape Overlay | Railway line | Railway station

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

VEGETATION PROTECTION OVERLAY (VPO) (WHITEHORSE)

VEGETATION PROTECTION OVERLAY - SCHEDULE 3 (VPO3) (WHITEHORSE)

VPO - Vegetation Protection Overlay | Railway line | Railway station

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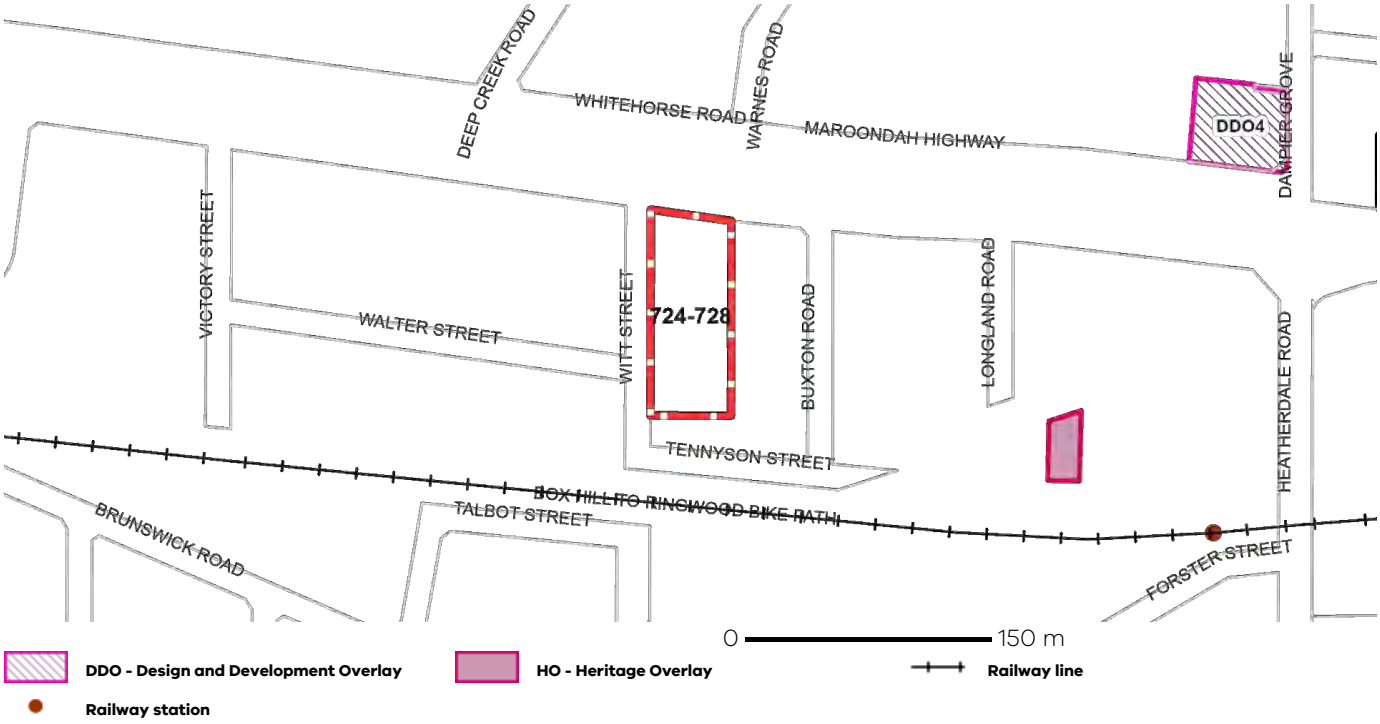
PLANNING PROPERTY REPORT

Planning Overlays

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

DESIGN AND DEVELOPMENT OVERLAY (DDO) (WHITEHORSE)
HERITAGE OVERLAY (HO) (MAROONDAH)
HERITAGE OVERLAY (HO) (WHITEHORSE)



Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

Further Planning Information

Planning scheme data last updated on 12 June 2024.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting https://www.planning.vic.gov.au

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the ***Planning and Environment Act 1987.***
It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit https://mapshare.maps.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

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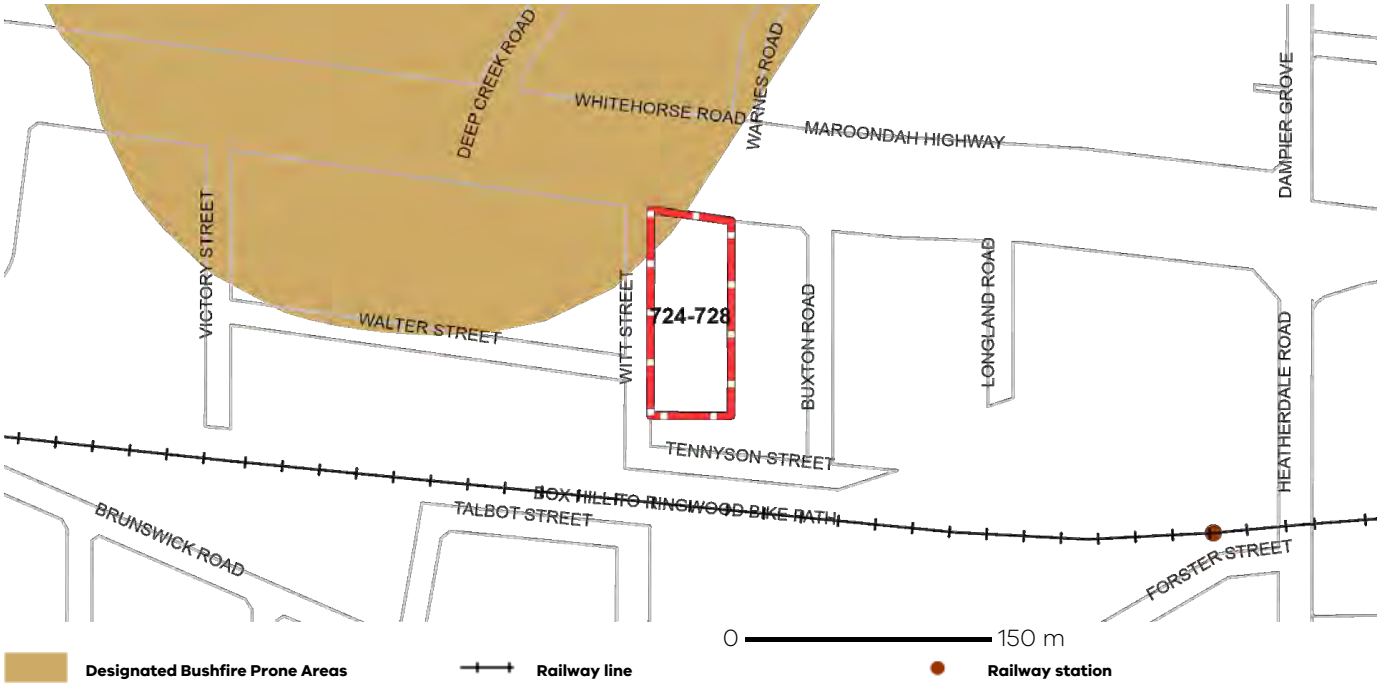
PLANNING PROPERTY REPORT

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire construction requirements apply to the part of the property mapped as a designated bushfire prone area (BPA). Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply.

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements.



Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA.

Designated BPA maps can be viewed on VicPlan at https://mapshare.vic.gov.au/vicplan/ or at the relevant local council.

Create a BPA definition plan in VicPlan to measure the BPA.

Information for lot owners building in the BPA is available at https://www.planning.vic.gov.au.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.vba.vic.gov.au. Copies of the Building Act and Building Regulations are available from http://www.legislation.vic.gov.au. For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au.

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see Native Vegetation (Clause 52.17) with local variations in Native Vegetation (Clause 52.17) Schedule

To help identify native vegetation on this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system https://nvim.delwp.vic.gov.au/ and Native vegetation (environment.vic.gov.au) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit NatureKit (environment.vic.gov.au)

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Read the full disclaimer at https://www.delwp.vic.gov.au/disclaimer

Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).

APPENDIX C

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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 11028 FOLIO 290 Security no : 124116662185F
Produced 16/07/2024 12:11 PM

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 448313E.
PARENT TITLE Volume 10759 Folio 300
Created by instrument AF315779H 04/09/2007

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NADRASCA of 52-62 ROOKS ROAD NUNAWADING VIC 3131
AF315779H 04/09/2007

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS448313E FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: 724-728 WHITEHORSE ROAD MITCHAM VIC 3132

DOCUMENT END

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HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 16/07/2024 12:21 PM

Volume 10759 Folio 300
Folio Creation: Created as a computer folio
Parent title Volume 10481 Folio 758

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
04/09/2007	12/09/2007	AF315779H	Y

Cancelled by AF315779H

STATEMENT END

Delivered from the LANDATA® System by InfoTrack Pty Ltd

VOTS Snapshot

Volume 10759 Folio 300
124007918729P
Produced 23/10/2003 04:08 pm

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 448313E.
PARENT TITLE Volume 10481 Folio 758
Created by instrument PS448313E 23/10/2003

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NADRASCA INCORPORATED of 1-19 COLOMBO STREET MITCHAM
PS448313E 23/10/2003

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE X809768V 12/10/2001
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS448313E FOR FURTHER DETAILS AND BOUNDARIES

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HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 16/07/2024 12:30 PM

Volume 10481 Folio 758
Folio Creation: Created as a computer folio

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
30/12/1999	13/01/2000	W496856W	Y	RECTIFICATION AMEND RP'S NAME TO READ "NADRASCA INCORPORATED"
12/10/2001	25/10/2001	X809768V	Y	MORTGAGE AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
10/10/2002	29/10/2002	AB618521V	Y

AGREEMENT SECTION 173 PLANNING AND ENVIRONMENT ACT 1987
AGREEMENT as to part Section 173 Planning and Environment Act 1987 as to part of Lot 1 on Title Plan 015661H AB618521V 10/10/2002

13/10/2003	23/10/2003	PS448313E	Y

PLAN OF SUBDIVISION, SUBDIVISION ACT 1988
Cancelled by PS448313E

STATEMENT END

HISTORICAL REPRINT(S)

Delivered from the LANDATA® System by InfoTrack Pty Ltd

LAND

LOT 1 on Title Plan 015661H.
Created by Application No. 113978Q 28/06/1999

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE
SOLE PROPRIETOR
    NADASCRA INCORPORATED; 1-19 COLOMBO STREET MITCHAM
    Application No. 113978Q 28/06/1999

ENCUMBRANCES, CAVEATS AND NOTICES

    Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section
    24 Subdivision Act 1988.
    Any other encumbrances shown or entered on the plan.

SEE TP015661H FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

Volume 10481 Folio 758

10130705180K Page 1
Produced 13/01/2000 08:35 am

LAND

LOT 1 on Title Plan 015661H.
Created by Application No. 113978Q 28/06/1999

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE
SOLE PROPRIETOR
    NADRASCA INCORPORATED; 1-19 COLOMBO STREET MITCHAM
    Application No. 113978Q 28/06/1999

ENCUMBRANCES, CAVEATS AND NOTICES

    Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988.
Any other encumbrances shown or entered on the plan.

SEE TP015661H FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

Volume 10481 Folio 758

122980542405K Page 1
Produced 25/10/2001 02:57 pm

LAND

LOT 1 on Title Plan 015661H.
Created by Application No. 113978Q 28/06/1999

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE
SOLE PROPRIETOR
NADRASCA INCORPORATED; 1-19 COLOMBO STREET MITCHAM
Application No. 113978Q 28/06/1999

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGES AND CHARGES IN PRIORITY RANKING
1 X809768V 12/10/2001 MORTGAGE
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP015661H FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

VOTS Snapshot

Volume 10481 Folio 758
124003636807B
Produced 29/10/2002 03:28 pm

LAND DESCRIPTION

Lot 1 on Title Plan 015661H.
Created by Application No. 113978Q 28/06/1999

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NADRASCA INCORPORATED of 1-19 COLOMBO STREET MITCHAM
Application No. 113978Q 28/06/1999

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE X809768V 12/10/2001
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP015661H FOR FURTHER DETAILS AND BOUNDARIES

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DEALING SEARCH Land Use Victoria

Produced 16/07/2024 12:48 PM

DEALING PS448313E PLAN OF SUBDIVISION

DEALING STATUS Registered DATE: 23/10/2003 IMAGED

Controlling Party HOLT & MACDONALD

Further Details
DATE LODGED 13/10/2003

FIRST IN CASE PS448313E

AFFECTED FOLIOS

FOLIOS	COFT SUPPLIED
10481/758	NONE

STATEMENT END

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APPENDIX D

Bore ID	Parish	Easting (MGA)	Northing (MGA)	Elevation (digitised)	Constructed date	Constructed depth	Bore type	Use 1	Driller	Drilling Method
119920	NUNAWADING	340953.2	5812944.1	149.04	6/02/1992 0:00	9	Groundwater	Groundwater Investigation	CROWDER, GREGORY R	MECHANICAL AUGER
119921	NUNAWADING	340968.2	5812942.1	149.07	6/02/1992 0:00	10.5	Groundwater	Groundwater Investigation	CROWDER, GREGORY R	MECHANICAL AUGER
140363	RINGWOOD	342884.2	5811322.1	84.34	29/11/1999 0:00	5.8	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
140364	RINGWOOD	342901.2	5811305.1	84.03	30/11/1999 0:00	5.5	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
140365	RINGWOOD	342901.2	5811305.1	84.03	30/11/1999 0:00	5.5	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
140366	RINGWOOD	342901.2	5811322.1	84.31	30/11/1999 0:00	5.5	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
140367	RINGWOOD	342875.2	5811306.1	84.28	30/11/1999 0:00	5.5	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
140368	RINGWOOD	342889.2	5811331.1	84.25	30/11/1999 0:00	5.5	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
140369	RINGWOOD	342901.2	5811334.1	84.29	30/11/1999 0:00	5.5	Groundwater	Groundwater Investigation	HANNAKER, CHRIS A	HAND AUGER
WRK059039		342880	5811339	84.52	28/07/2009 0:00	6	Groundwater	Dewatering	MERARI, MIKE	MECHANICAL AUGER
WRK059040		342878	5811315	84.49	28/07/2009 0:00	6	Groundwater	Dewatering	MERARI, MIKE	
WRK059041		342923	5811322	84.06	28/07/2009 0:00	6	Groundwater	Dewatering	MERARI, MIKE	
WRK059042		342924	5811309	84.05	28/07/2009 0:00	6	Groundwater	Dewatering	MERARI, MIKE	
WRK070744		343256	5813023		4/09/2012 0:00	25	Groundwater	Observation	PAUL RODSET	MECHANICAL AUGER
WRK070745		343256	5813023		6/09/2012 0:00	24	Groundwater	Observation	PAUL RODSET	
WRK076498		341893	5812451		18/10/2013 0:00	15.7	Groundwater	Observation	PIKE Andrew	NOT KNOWN
WRK097300		343874	5812969		12/01/2017 0:00	19	Groundwater	Observation	THOMAS Jye	NOT KNOWN
WRK097301		343870	5812975		10/01/2017 0:00	19	Groundwater	Observation	THOMAS Jye	NOT KNOWN
WRK097302		343863	5812960		9/01/2017 0:00	19	Groundwater	Observation	THOMAS Jye	NOT KNOWN
WRK098296		343863	5812969		9/01/2017 0:00	19	Groundwater	Observation	THOMAS Jye	NOT KNOWN
WRK100197		342010	5814084		1/05/2017 0:00	4.3	Groundwater	Observation	GALLIEN Brad	NOT KNOWN
WRK100598		342870	5811305		1/06/2017 0:00	4.5	Groundwater	Groundwater Investigation	WARD Shaun M	NOT KNOWN
WRK962785	NUNAWADING	343376	5812841	108.24	30/09/2003 0:00	15	Groundwater	Groundwater Investigation	BARNES S	MECHANICAL AUGER
WRK962786	NUNAWADING	343391	5812835	108.23	30/09/2003 0:00	15	Groundwater	Groundwater Investigation	BARNES S	MECHANICAL AUGER
WRK962787	NUNAWADING	343379	5812825	108.24	30/09/2003 0:00	15	Groundwater	Groundwater Investigation	BARNES S	MECHANICAL AUGER
WRK968476	NUNAWADING	342143	5813429	110.77	0000-00-00 00:00:00	30	Groundwater			
WRK968478	NUNAWADING	341635.2	5814557.1	107.48	0000-00-00 00:00:00	50	Groundwater			
WRK968479	NUNAWADING	341847.2	5814237.1	97.34	0000-00-00 00:00:00	40	Groundwater			
WRK968480	NUNAWADING	341946.2	5814388.1	80.07	0000-00-00 00:00:00	30	Groundwater			
WRK968481	NUNAWADING	341994.2	5814644.1	114.73	0000-00-00 00:00:00	50	Groundwater			
WRK968482	WARRANDYTE	342302.2	5814426.1	118.06	0000-00-00 00:00:00	55	Groundwater			
WRK968483	NUNAWADING	342184.2	5813913.1	103.17	0000-00-00 00:00:00	45	Groundwater			
WRK968484	WARRANDYTE	342635.2	5814164.1	135.93	0000-00-00 00:00:00	55	Groundwater			
WRK968485	NUNAWADING	342775.2	5813812.1	119.28	0000-00-00 00:00:00	30	Groundwater			
WRK973491	NUNAWADING	342880	5811339	84.52	0000-00-00 00:00:00	4	Groundwater			
WRK986074	WARRANDYTE	342569	5814311	150.56	0000-00-00 00:00:00	25	Groundwater			
WRK987200	NUNAWADING	342897	5811326	84.23	0000-00-00 00:00:00	25	Groundwater			
WRK989856	NUNAWADING	341005	5813181	147.58	26/02/2009 0:00	35	Groundwater	Groundwater Investigation	BOYD, JASON	
WRK989857	NUNAWADING	341009	5813139	148.37	0000-00-00 00:00:00	25	Groundwater			
WRK989858	NUNAWADING	341038	5813162	148.79	0000-00-00 00:00:00	25	Groundwater			
WRK990741	NUNAWADING	343242	5813048	116.35	0000-00-00 00:00:00	25	Groundwater			

APPENDIX E

CATHODIC PROTECTION SYSTEM DATABASE SEARCH

Primary Search criteria: Suburb contains "Mitcham"
Secondary Search criteria: None

CPS Reg Number	Address	Suburb	Structure Protected	Owner	Approved current output	Status	Type of system
CPS-00619	MW PIPETRACK AT CLIVE STREET MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	45.0	DECOMMISSIONED	IMPRESSED CURRENT
CPS-00706	AT MMBW EASTERN DEPOT, LUCKNOW ST MITCHAM VIC 3132	MITCHAM	OTHER	MELBOURNE WATER CORPORATION	1.2	OPERATIONAL	GALVANIC ANODES
CPS-01050	MITCHAM RD AT CARWEEN GVE MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	YARRA VALLEY WATER CORPORATION	0.1	OPERATIONAL	GALVANIC ANODES
CPS-01051	PIPETRACK AT HEATHERDALE RD MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.5	OPERATIONAL	GALVANIC ANODES
CPS-01618	FOOD PLUS SHOP 240 MITCHAM RD MITCHAM VIC 3132	MITCHAM	UNDERGROUND FUEL TANK	BP AUSTRALIA PTY LTD	0.3	OPERATIONAL	GALVANIC ANODES
CPS-01701	16 MONOMEATH DVE MITCHAM VIC 3132	MITCHAM	UNDERGROUND FUEL TANK	WILSONS SHEET METALS PTY LTD	0.03	OPERATIONAL	GALVANIC ANODES
CPS-01859	COCHRANE ST AT VR LINE MITCHAM VIC 3132	MITCHAM	PIPELINE - GAS	MULTINET GAS (DB NO 1) PTY LTD & MULTINET GAS (DB NO 2) PTY LTD	0.05	OPERATIONAL	GALVANIC ANODES
CPS-02124	WINCHESTER RD AT MITCHAM RD MITCHAM VIC 3132	MITCHAM	OTHER	AUSNET GAS SERVICES	0.1	OPERATIONAL	GALVANIC ANODES
CPS-02228	HEDGE END RD AT MITCHAM RD MITCHAM VIC 3132	MITCHAM	PIPELINE - GAS	MULTINET GAS (DB NO 1) PTY LTD & MULTINET GAS (DB NO 2) PTY LTD	0.1	OPERATIONAL	GALVANIC ANODES
CPS-02303	LUCKNOW ST NEAR EASTERN DEPOT ENTRANCE MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-02304	LUCKNOW ST NEAR MITCHAM RD MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-02305	MAROONDAH HWY NEAR LEE PDE MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-02306	MITCHAM RD NEAR SIMPSOM ST MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-02307	MITCHAM RD NEAR WINDOURAN DVE MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-02490	MITCHAM RD AT AGRA ST MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	YARRA VALLEY WATER CORPORATION	0.1	OPERATIONAL	GALVANIC ANODES
CPS-02511	MITCHAM RD AT PIPETRACK MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-02512	PIPETRACK EAST OF MITCHAM RD MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-03516	FUEL BAY EASTERN DEPOT MITCHAM VIC 3132	MITCHAM	UNDERGROUND FUEL TANK	MELBOURNE WATER CORPORATION	0.6	OPERATIONAL	GALVANIC ANODES
CPS-03744	PIPETRACK 114.8M SW OF BRUNSWICK ROAD MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-03745	PIPETRACK 128.2M SW OF BRUNSWICK ROAD MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.1	OPERATIONAL	GALVANIC ANODES

CATHODIC PROTECTION SYSTEM DATABASE SEARCH

CPS Reg Number	Address	Suburb	Structure Protected	Owner	Approved current output	Status	Type of system
CPS-04018	HEATHERDALE RESERVE, HEATHERDALE ROAD MITCHAM VIC 3132	MITCHAM	PIPELINE - GAS	MULTINET GAS (DB NO 1) PTY LTD & MULTINET GAS (DB NO 2) PTY LTD	22.0	OPERATIONAL	IMPRESSED CURRENT
CPS-05407	MAROONDAH HWY. AT COCHRANE ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05408	AGRA ST., W OF MITCHAM RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05409	AGRA ST., W OF MITCHAM RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05413	LUCKNOW ST., 34.5M E OF RONALD ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05414	LUCNOW ST., 26.7M W OF LUCKNOW CT. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05415	LUCKNOW ST., 13.7M E OF BRIAN ST.(EBL EXT) MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05417	MITCHAM RD., 25.7M N OF QUARRY RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	YARRA VALLEY WATER	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05418	MITCHAM RD., 79.7M S OF PIPE TRACK MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05419	MAROONDAH HWY., 23.4M E OF LEE PDE. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	YARRA VALLEY WATER	0.1	OPERATIONAL	GALVANIC ANODES
CPS-05423	LUCKNOW ST., 10.1M W OF MITCHAM RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05424	LUCKNOW ST., 10.1M W OF MITCHAM RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.25	OPERATIONAL	GALVANIC ANODES
CPS-05425	CANTERBURY RD., 56.8M E OF BOULTON RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05437	PIPE TRACK, 125.4M SW OF HEATHERDALE RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05438	PIPE TRACK, 60.2M E OF VICTORY ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05439	PIPE TRACK, 4.8M W OF BUXTON RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05440	PIPE TRACK, 9.4M E OF PERCY ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05441	AGRA ST., 21.4M E OF MITCHAM RESERVOIR MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05443	PIPE TRACK, 15.8M W OF WITT ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05444	PIPE TRACK, NE OF BRUNSWICK RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES

CATHODIC PROTECTION SYSTEM DATABASE SEARCH

CPS Reg Number	Address	Suburb	Structure Protected	Owner	Approved current output	Status	Type of system
CPS-05445	PIPE TRACK, 68M E OF VICTORY ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05446	PIPE TRACK AT COCHRANE ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05447	PIPE TRACK, 116.4M W OF HEATHERDALE RD. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05448	MITCHAM RD., 122.3M N OF WILLIAM ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	YARRA VALLEY WATER	0.2	OPERATIONAL	GALVANIC ANODES
CPS-05449	MITCHAM RD., 29.4M W OF COCHRANE ST. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.3	OPERATIONAL	GALVANIC ANODES
CPS-05650	MAROONDAH HWY., 20.3M W OF LEE PDE. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.15	OPERATIONAL	GALVANIC ANODES
CPS-05651	PIPE TRACK, 33.7M W OF SHADY GV. MITCHAM VIC 3132	MITCHAM	PIPELINE - WATER	MELBOURNE WATER CORPORATION	0.2	OPERATIONAL	GALVANIC ANODES
CPS-06693	CREEK ROAD AND MCGHEE AVENUE MITCHAM VIC 3132	MITCHAM	PIPELINE - GAS	MULTINET GAS (DB NO 1) PTY LTD & MULTINET GAS (DB NO 2) PTY LTD	0.05	OPERATIONAL	GALVANIC ANODES
CPS-06764	OUTSIDE NO.13 YOUNG ST MITCHAM VIC 3132	MITCHAM	PIPELINE - GAS	MULTINET GAS (DB NO 1) PTY LTD & MULTINET GAS (DB NO 2) PTY LTD	0.05	OPERATIONAL	GALVANIC ANODES
CPS-06765	RANGEVIEW RD & YOUNG ST MITCHAM VIC 3132	MITCHAM	PIPELINE - GAS	AUSNET GAS SERVICES	0.05	OPERATIONAL	GALVANIC ANODES

Disclaimer

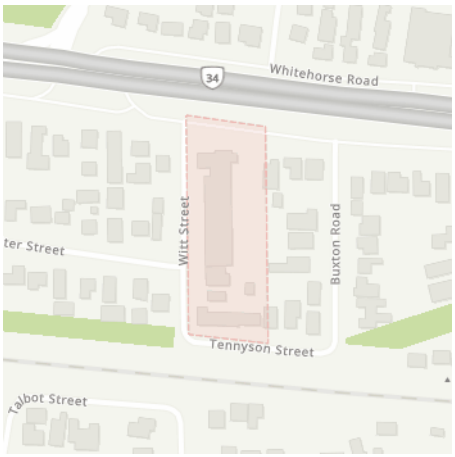
Energy Safe Victoria provides Cathodic Protection system information in good faith, but cannot guarantee the completeness or accuracy of or validate the information provided. The Cathodic Protection (CP) database is a register of currently operating Cathodic Protection systems in Victoria and was established in 1970. The CP database is administered under the Electricity Safety Act 1998 and the Electricity Safety (Cathodic Protection) Regulations 2019. Some underground fuel tanks may not be listed in the CP database including: if the tank is not metallic (therefore not requiring CP); the tank is metallic but CP was not installed; the CP system was not registered, the CP was installed after 26 November 2019 after which galvanic anodes under 250mA were no longer required to be registered; or the CP system has been de-commissioned. If you believe underground tanks may be present and not shown on ESV's CP database you should conduct your own tests and investigations. ESV accepts no responsibility or liability for or arising from your use of, or reliance on, information obtained from the CPS database.

**** If a drawing of the CPS system is required, please contact the CPS Owner**

APPENDIX F

Job ID 37087975
AGS240210

Review responses online



Received 9 of 10 responses
Waiting for more

1 Witt Street, Mitcham VIC 3132

Job dates
12/07/2024 → 12/07/2024

These plans expire on
6 Aug 2024

Lodged by
Richard Walsh

Authority	Status	Page
BYDA Confirmation		2
Melbourne Water	Received	4
Metro Trains PTY	Received	14
Multinet Gas	Received	23
NBN Co VicTas	Waiting	-
Optus and or Uecomm Vic	Received	31
Telstra VICTAS	Received	50
United Energy	Received	59
VicTrack Access	Received	74
Whitehorse City Council	Received	78
Yarra Valley Water Ltd	Received	82

Job No 37087975

byda.com.au

Contact Details

Contact	Contact number	Company	Enquirer ID
Richard Walsh	0477 327 323	AGS Environmental	3228334

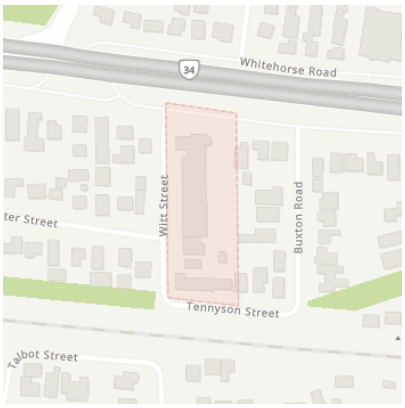
Email
rwalsh@agses.com.au

Address
Unit 16 25 Gipps Street
Collingwood VIC 3066

Job Site and Enquiry Details

WARNING: The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

Enquiry date	Start date	End date	On behalf of	Job purpose	Locations	Onsite activities
09/07/2024	12/07/2024	12/07/2024	Private	Excavation	Private	Vertical Boring



Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

User Reference	Address	Notes/description
AGS240210	1 Witt Street Mitcham VIC 3132	-

Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the Privacy Policy and Term of Use.
- For more information on safe digging practices, visit www.byda.com.au

Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

Referral ID (Seq. no)	Authority Name	Phone	Status
241651769	Melbourne Water	13 17 22	NOTIFIED
241651773	Metro Trains PTY	1800 800 007	NOTIFIED
241651766	Multinet Gas	(03) 9535 8326	NOTIFIED
241651772	NBN Co VicTas	1800 687 626	NOTIFIED
241651767	Optus and or Uecomm Vic	1800 505 777	NOTIFIED
241651771	Telstra VICTAS	1800 653 935	NOTIFIED
241651768	United Energy	1300 131 689	NOTIFIED
241651765	VicTrack Access	(03) 9619 1114	NOTIFIED
241651764	Whitehorse City Council	(03) 9262 6333	NOTIFIED
241651770	Yarra Valley Water Ltd	1300 853 811	NOTIFIED

END OF UTILITIES LIST

The 5Ps of Safe Excavation

Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a skilled Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

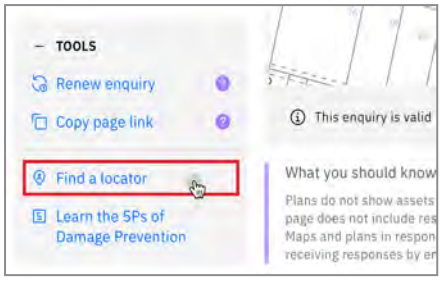
Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Engage a skilled Locator



When you lodge an enquiry you will see skilled Locators to contact

Visit the Certified Locator website directly and search for a locator near you

dbydlocator.com/certified-locating-organisation

Book a FREE BYDA Session

BOOK NOW

BYDA offers two different sessions to suit you and your organisation's needs. The free sessions are offered in two different formats - online and face-to-face:

1. **Awareness Session:** Understand the role of BYDA, safe excavation practices, complying with asset-owner instructions, and the consequences of damages. Learn how to mitigate and avoid potential damage and harm and ensure a safe work environment.
2. **Plan Reading Session:** Develop the skills to interpret asset owners' plans, legends, and symbols effectively. Understand the complexities of plan interpretation to ensure smooth project execution.

To book a session, visit:
byda.com.au/contact/education-awareness-enquiry-form/

Melbourne Water

Referral
241651769

Member Phone
13 17 22

Responses from this member

Response received Tue 9 Jul 2024 3.46pm

File name	Page
Response Body	5
Utility Installation Near Melbourne Water Assets 241651769.pdf	6
Melbourne_Water_ASSET_Response_letter 241651769.pdf	8
build_over_guide 241651769.pdf	9
ASSET 241651769.pdf	11

ATTENTION: Richard Walsh, rwalsh@agses.com.au

Re: Before You Dig - Sequence No 241651769

Thank you for your BYDA enquiry.

Please DO NOT SEND A REPLY to this email as it has been automatically generated and replies are not monitored.

Enquiry location: 1 Witt Street

Mitcham

VIC, 3132

Activity: Vertical Boring

Commencement Date: 12 July 2024

Attached are the files containing information relating to your recent BYDA request. Please read and understand all the attached documentation and contact Melbourne Water on

13 17 22 or enquiry@melbournewater.com.au if you have any queries.

You may also view the response with an interactive web map below:-

View on web map

Note: If you have received this email in error, please advise us by calling 13 17 22 and quote the Sequence Number listed above.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as:

Adobe Acrobat Reader (for PDF files) - Adobe Reader

DIAL BEFORE YOU DIG www.1100.com.au The Essential First Step.

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Melbourne Water Corporation or SmarterWX shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

Quick tip:

For informaion on underground assets, please call Dial Before You Dig on

1100

Workplace Safety
If utilities are being installed under/near natural or artificial waterways, contractors will be required to address the following issues:

- Method of waterway/stream diversion
- Evacuation procedures for people and machinery in the event of heavy rainfall or flooding
- Compliance with Victorian Workcover Authority requirements.

Application Submissions
All utility installation applications should include the following information:

- Property address and location
- Proposed works and specifications
- Alignment/location of works
- Dimensions and clearances
- Method of installation
- Survey plans of the property
- Workplace safety requirements if applicable

Utility installation submissions will attract a standard application fee.

Please note: This does not preclude the need to obtain other relevant approvals and operation of other legislations, eg: SBO, LSIO.

Contacts and Queries
This brochure is a general guide for utility installation only. **Melbourne Water approval must be acquired before any excavation or installation occurs.**

Who do I contact?

This brochure is a general guide. Not all structures have been listed in this brochure. Please contact Melbourne Water - Asset Services for further information regarding structure requirements, build-over agreements and conditions. Applications can be posted to:

Postal address:
Asset Services
Melbourne Water Corporation
PO Box 4342 Melbourne Victoria 3001

ISBN 978-921603-48-8 (print)
ISBN 978-921603-47-1 (web)

Email address:
assetservices@melbournewater.com.au

Web Site:
www.melbournewater.com.au

General Melbourne Water Enquiries 131722

Asset Services Enquiries 9679 6614

Version 2: June 2009

Melbourne Water

Utility installation Near Melbourne Water Assets Guide

Victoria
The Place To Be

Melbourne Water

Melbourne Water must give approval before any installation of utilites or excavation occurs.

Utility Installation

This brochure is a general guide when considering utility installations aligned across or parallel to a Melbourne Water asset. Melbourne Water assets include:

- Sewage pipes
- Stormwater/drainage pipes
- Water mains
- Natural and artificial channels

Before any installation or excavation occurs Melbourne Water approval is required. This enables consent to be given for the proposed works while protecting Melbourne Water's continuous rights of access.

Detailed plans and a formal application must be submitted to Melbourne Water for investigation.

Clearance Requirements

All clearances are measured from the exterior surfaces of pipe/channel walls, not centrelines or inner wall surfaces. Vertical clearances for natural streams are measured from the base of the hard invert level. Clearance requirements are set considering method of installation, soil conditions, asset type, size and age.

Please Note

Separate clearance guidelines are followed for property development structures and tree planting near Melbourne Water assets.

Underground Assets

Open Cut - Involves excavating soil to form a trench, enabling new infrastructure to be laid/ repaired/ removed, and is then backfilled. General Melbourne Water requirements are:

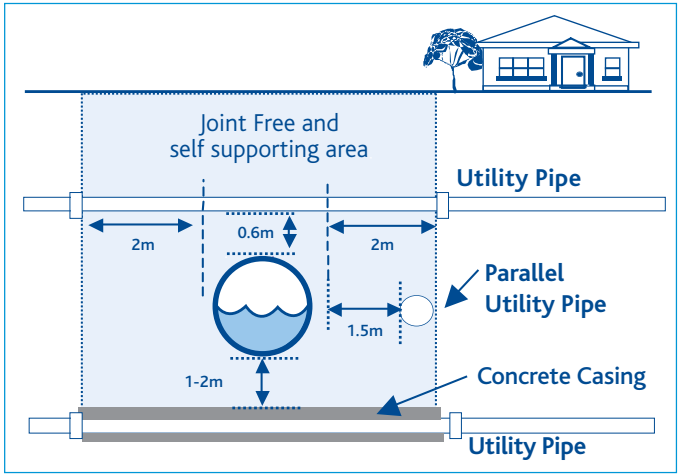
- A **1.0 metre** minimum vertical clearance between the utility and asset
- Concrete cut-offs must be constructed
- Soil compaction to 95% - 98%
- Ground surface to be returned to original condition as per Melbourne Water requirements

Passing over pipes

- Any utility must be self-supporting in the event maintenance is undertaken on the Melbourne Water asset
- Minimum vertical clearance of **0.6 metres** above asset
- No joints to be located within **2.0 metres** of the asset (must be outside the joint free area refer to diagram).

Passing under pipes

- Must be cased in concrete or similar protective material
- Must have a minimum clearance of **1.0m for open cut and 2.0m for boring** installation methods
- No joints to be located within **2.0 metres** of the asset (must be outside the joint free area refer to diagram)



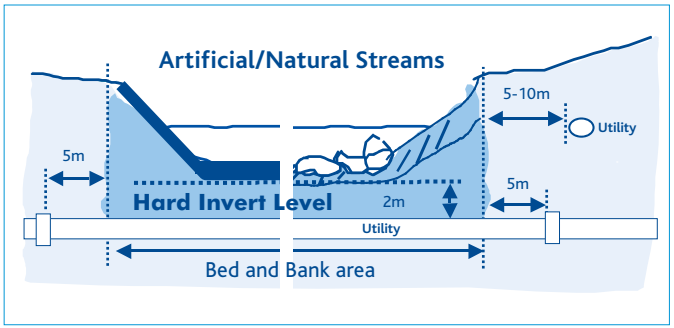
Waterways and Constructed Channels

Boring - Involves a small tunnel being drilled through soil enabling new infrastructure to be laid. General Melbourne Water requirements are:

- For all waterways boring is the preferred method*
- Engineering calculations must be supplied to confirm no soil up thrust/down thrust occurs.
- No settlement is to occur following installation - air pockets are to be avoided.
- Must have a minimum vertical clearance of **2.0 metres**, measured from the hard invert level of the bed of the waterway/channel.
- Manholes/parallel utilities require a horizontal clearance of **5-10 metres** from the bed and bank area for future channel/waterway works or maintenance.
- No joints are permitted under the channel/waterway or within **5.0 metres** from the bed and bank area.
- Developer/Contractor must investigate and ensure legal requirements are met regarding significant flora, fauna and archaeological sites of significance.
- Disturbance to waterways/land/vegetation will be kept to a minimum and the affected areas replanted/reinstated upon completion of the works.

*If boring is not possible the following submissions are required to support any altered proposals:

- Geotechnical Survey
- Environmental Report



Re: Dial Before You Dig - Sequence No 241651769

Dear Richard Walsh,

Location Details
Address: 1 Witt Street
Mitcham VIC 3132

Activity: Vertical Boring
Commencement Date: 12 July 2024

According to our records your enquiry with the above details **does impact** our infrastructure. Please review other documents included with this response for additional detail.

Melbourne Water Corporation (MWC) shall not be responsible or otherwise liable in any way for loss of any kind including, without limiting the generality of the foregoing damages, costs, interest, loss of profits or special loss or damage arising from any error, inaccuracy, incompleteness or other defect in this information.

Please note, the attached plans do not constitute approval from Melbourne Water.

Please email DBYD@melbournewater.com.au for **detailed asset locations** allowing **at least 5 business days**.

If planning to undertake work over, under or near any Melbourne Water assets please contact our **Asset Services Team** via **Customer Service** on **131 722** or at http://melbournewater.com.au/constructingnearassets **at least 28 days prior** to the **commencement** of **any** work.

By receiving and accepting this information the recipient acknowledges that Melbourne Water Corporation makes no representation as to the accuracy or completeness of this information. The exact location of Melbourne Water Corporation's assets as set out in this information should be confirmed on site by the recipient prior to the commencement of work.

Please Note: Due to ongoing potential asset changes the attached plan/s is/are valid for 28 days from the date of issue. After that period the plan/s should not be used, rather a new plan should be obtained.

Warning: Assets may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS (asbestos) Regulations.

Melbourne Water Corporation provides wholesale Water Supply and Sewerage services to City West Water, South East Water and Yarra Valley Water, who in turn provide local residents with Water Supply and Sewerage services. MWC, in conjunction with Local Government, manage Melbourne's drainage infrastructure. Local councils maintain the local drainage infrastructure, while MWC provides the major infrastructure.

The attached plans only show MWC's assets and not all Water Supply, Sewerage and Drainage pipelines.

For location of local Water Supply and Sewer pipelines please contact:

City West Water	**13 26 42**
South East Water	**9552 3770**
Yarra Valley Water	**1300 651 511**

For location of local Drainage pipelines please contact the relevant Council.

Melbourne Water respects the privacy of your personal information and we collect and handle it in accordance with Victoria's Privacy laws. You may access your personal information at Melbourne Water. Contact our Privacy Officer: phone 131 722, email enquiry@melbournewater.com.au.

Melbourne Water Corporation
Address: 990 La Trobe Street, Docklands
Postal Address: PO Box 4342, Melbourne, VIC 3001
131 722

DIAL BEFORE YOU DIG www.1100.com.au The Essential First Step.

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Melbourne Water Corporation or SmarterWX shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

Quick tip:

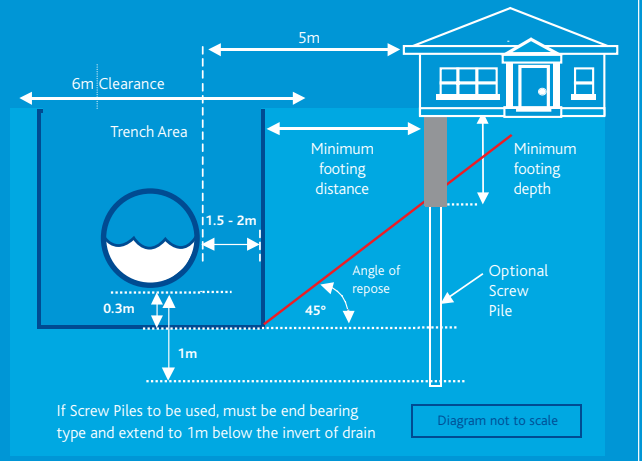
For informaion on underground assets, please call Dial Before You Dig on

1100

Structures Near Assets
Structures built near assets are required to meet Melbourne Water's foundation criteria and overland flow path standard clearance requirements to ensure the safety of the proposed structures and existing pipe networks.

Structures on or above assets
Generally structures are not permitted over Melbourne Water assets, however some structures may be approved if minimum clearance conditions are met, the structure is non-permanent and can be fully removed. Eaves and overhangs are not permitted.

Angle of Repose
The below diagram shows how to calculate minimum footing depth and footing distance. Footings must meet or exceed these minimum requirements



If Screw Piles are to be adopted, evidence will need to be supplied by a qualified engineer indicating that the footing will not be affected from any excavation work undertaken by Melbourne Water abutting the Screw Pile

What Needs Approval?
All structures to be built/dismantled near a Melbourne Water asset require Melbourne Water's approval and consent. Examples of structures that require approval include:

- Sheds
- Swimming Pools
- Gazebo/Decking/Verandas
- Landscaping/Excavating
- Tree planting/removal
- Fences
- Garages
- Car Ports
- Driveways
- Houses/extensions
- Demolition and Earthworks
- Any type of structure/works

Please note: This does not preclude the need to obtain other relevant approvals and operation of other legislations, eg: SBO, LSIO.

Who do I contact?

This brochure is a general guide. Not all structures have been listed in this brochure. Please contact Melbourne Water - Asset Services for further information regarding structure requirements, build-over agreements and conditions. Applications can be posted to:

Postal address:
Asset Services
Melbourne Water Corporation
PO Box 4342 Melbourne Victoria 3001

ISBN 978-921603-50-1 (print)
ISBN 978-921603-49-5 (web)

Email address:
assetservices@melbournewater.com.au

Web Site:
www.melbournewater.com.au

General Melbourne Water Enquiries 131722

Asset Services Enquiries 9679 6614

Version 2: June 2009

Melbourne Water

Build Over Guide

Victoria
The Place To Be

Melbourne Water

Melbourne Water must give consent for any structure to be built over or near any of its underground assets or easements.

What is a Build Over?

A build over is when a property owner plans to build near, on or above an easement, pipe or other asset* controlled by Melbourne Water. A legally binding Build Over Agreement is entered into by Melbourne Water and the property owner giving consent for the structure to be built, yet protecting Melbourne Water's continuous rights of access.

*Assets include:

- Easements
- Water mains
- Sewage pipes
- Access pits/Man holes.
- Drainage pipes and Channels

Melbourne Water must protect its rights of access to ensure it is able to fulfil its statutory obligations relating to the installation and maintenance of assets.

For any new subdivision, Melbourne Water will seek as a minimum to have a 6m easement located centrally over the asset.

Each build over application is considered on a case-by-case basis, as there are a number of factors that may effect each proposal:

- Ground conditions
- Foundation clearance
- Pipe: type, size, condition, age
- Overland flow path
- Proposed structure clearance
- Load impacts on assets

General Structure Requirements (Residential Purposes)

- No private underground services are to be laid within an easement However, consideration may be given to services crossing the asset.
- A horizontal clearance of a minimum 5 metres is required if a structure is adjacent to a drainage channel.
- No structure must place additional load on the asset. For all structures the depth of the footings must be adequate to satisfy the angle of repose relative to the asset. Refer over page.
- Setback of buildings (including footings and eaves) shall be the greater of the following criteria:
  - Must be set outside the easement, or
  - A minimum offset of 5 metres horizontally clear of the outside edge of the assets.[1] (Under section 148 Water Act)
- A horizontal clearance of **2 metres** is required for utility services adjacent to a Melbourne Water access pit
- Small sheds proposed with maximum floor area within the easement less than 4m² will be considered, dependant on overland flow requirements
- A minimum soil cover of 850mm must be maintained over the asset.
- Acceptable hardstand areas are new Bubbulle pavers set on a sand and crushed rock base, or
- Concrete driveways (domestic) not exceeding a 100mm thickness.

Approval will not be granted if the proposed structure obstructs overland flow. Guidelines for development in flood prone areas can be found at melbournewater.com.au

Industrial/Commercial Property

- No building/structure will be considered within any easement or 5 metres either side of Melbourne Water's asset.

Utility Installation

Separate conditions are applicable for utility cables/pipe installations near, or crossing Melbourne Water assets/easements. Refer to Melbourne Water's Utilities Installation Brochure or contact Melbourne Water – Land Management for further information.

Build over application

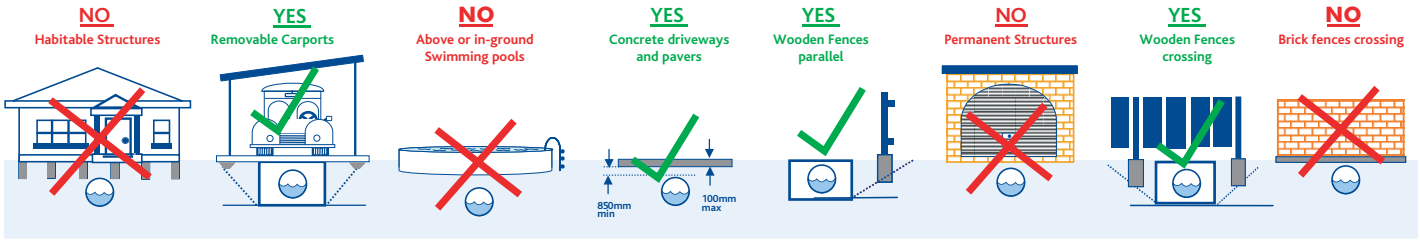
Any submitted build over applications should include the following information:

- Completed build over application form*
- Structure type and specifications
- Structure location within the property
- General dimensions and clearances
- Footing details (type/depth etc)
- Survey plans of the property

Build over submissions will attract a standard application fee.

*Build over application forms can be found at **melbournewater.com.au**

[1] For site specific restrictions, case by case will be considered.

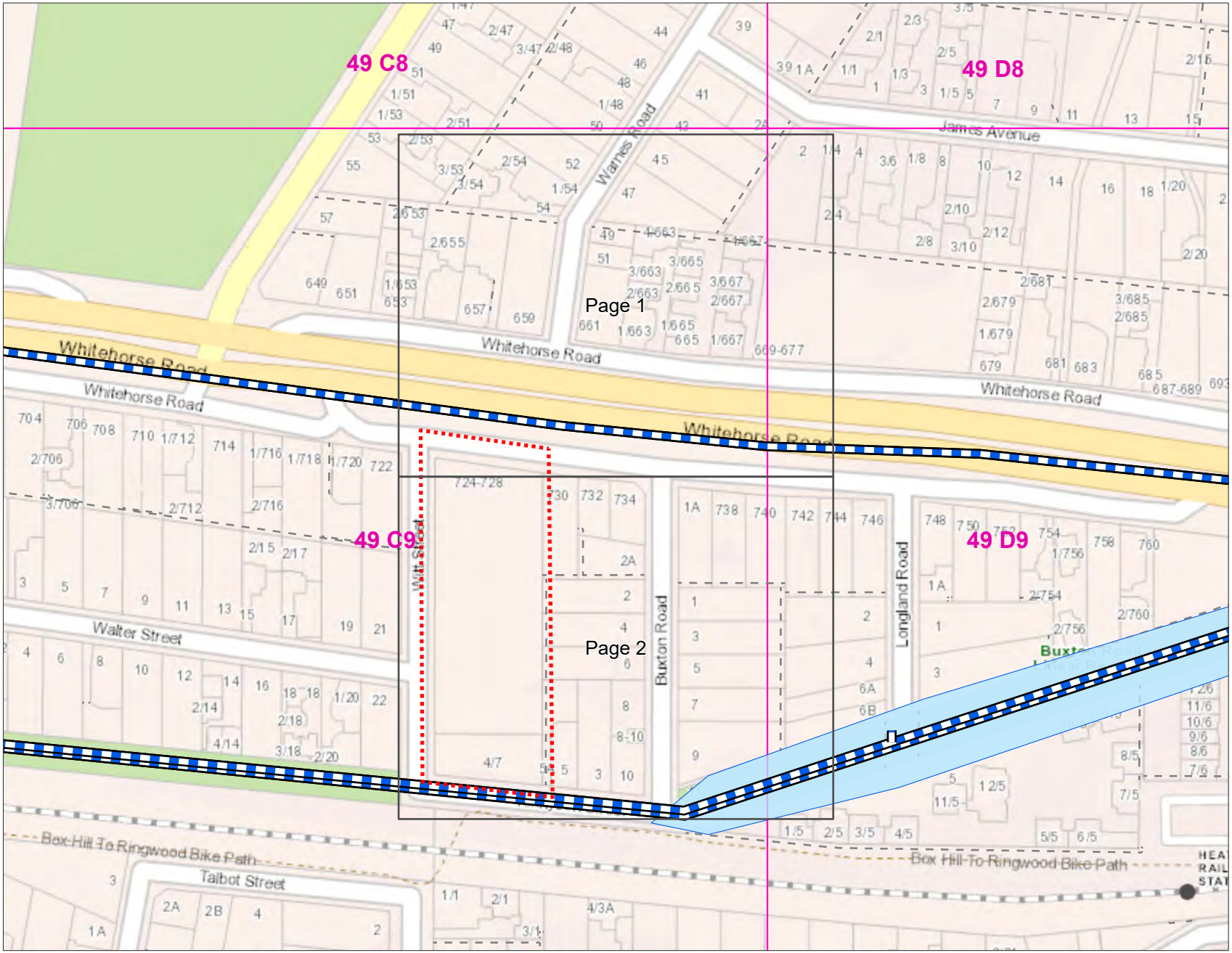


Melbourne Water

Job # 37087975 Seq # 241651769

Provided by: Melbourne Water

BEFORE YOU DIG www.byda.com.au



Legend

- BYDA Enquiry
- Detailed map page

Water

- Water Supply Main
- Cathodic Protection Zone

Basemap

- Easements
- Melway Index
- Electricity Main
- Recycled (Non Drinking) Water Main
- Drainage Pipeline
- Drainage Abandoned Main
- Sewer Main
- Abandoned Sewer Main
- Water Supply Scour
- Water Supply Main
- Abandoned Water Supply Main
- Water Service Reservoir
- Cathodic Protection Zone
- Channel Centreline
- Natural Waterway

Please refer to map sheet(s) for details

N

Scale 1:2,500

0 25 50 100 m

Assets may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS (asbestos) Regulations.

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Melbourne Water or SmarterWX shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

Vicmap Basemap Services © State of Victoria (Department of Environment, Land, Water and Planning)

Index Sheet

Plans generated by SmarterWX™

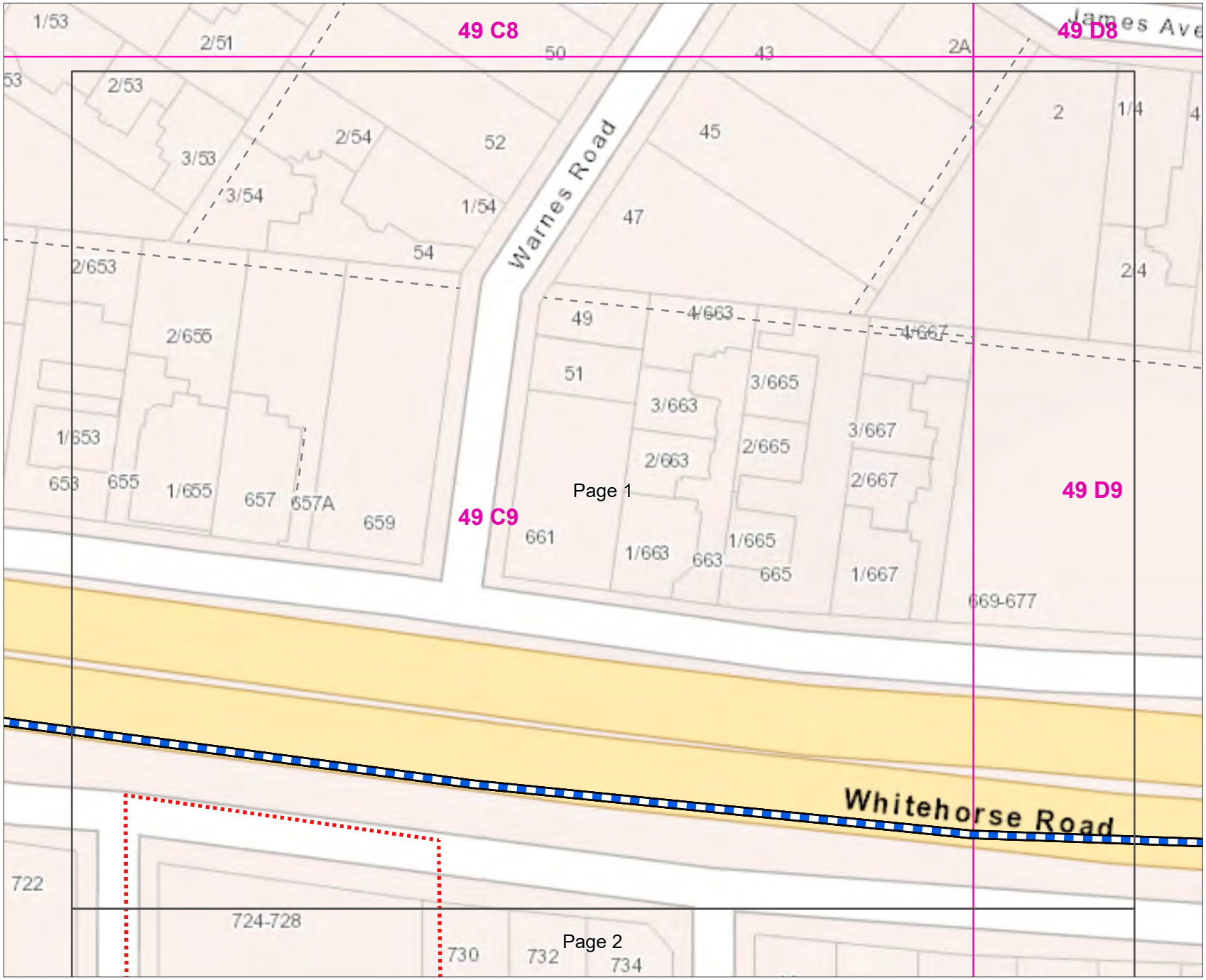
Plans generated 09/07/24 (valid for 28 days)

Melbourne Water

Job # 37087975 Seq # 241651769

Provided by: Melbourne Water

BEFORE YOU DIG www.byda.com.au



Legend

- BYDA Enquiry

Water

- Water Supply Main

Basemap

- Easements
- Melway Index
- Electricity Main
- Recycled (Non Drinking) Water Main
- Drainage Pipeline
- Drainage Abandoned Main
- Sewer Main
- Abandoned Sewer Main
- Water Supply Scour
- Water Supply Main
- Abandoned Water Supply Main
- Water Service Reservoir
- Cathodic Protection Zone
- Channel Centreline
- Natural Waterway

N

Scale 1:1,000

0 10 20 40 m

Assets may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS (asbestos) Regulations.
DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Melbourne Water or SmarterWX shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.
Vicmap Basemap Services © State of Victoria (Department of Environment, Land, Water and Planning)

Map Sheet

Plans generated by SmarterWX™

Plans generated 09/07/24 (valid for 28 days)

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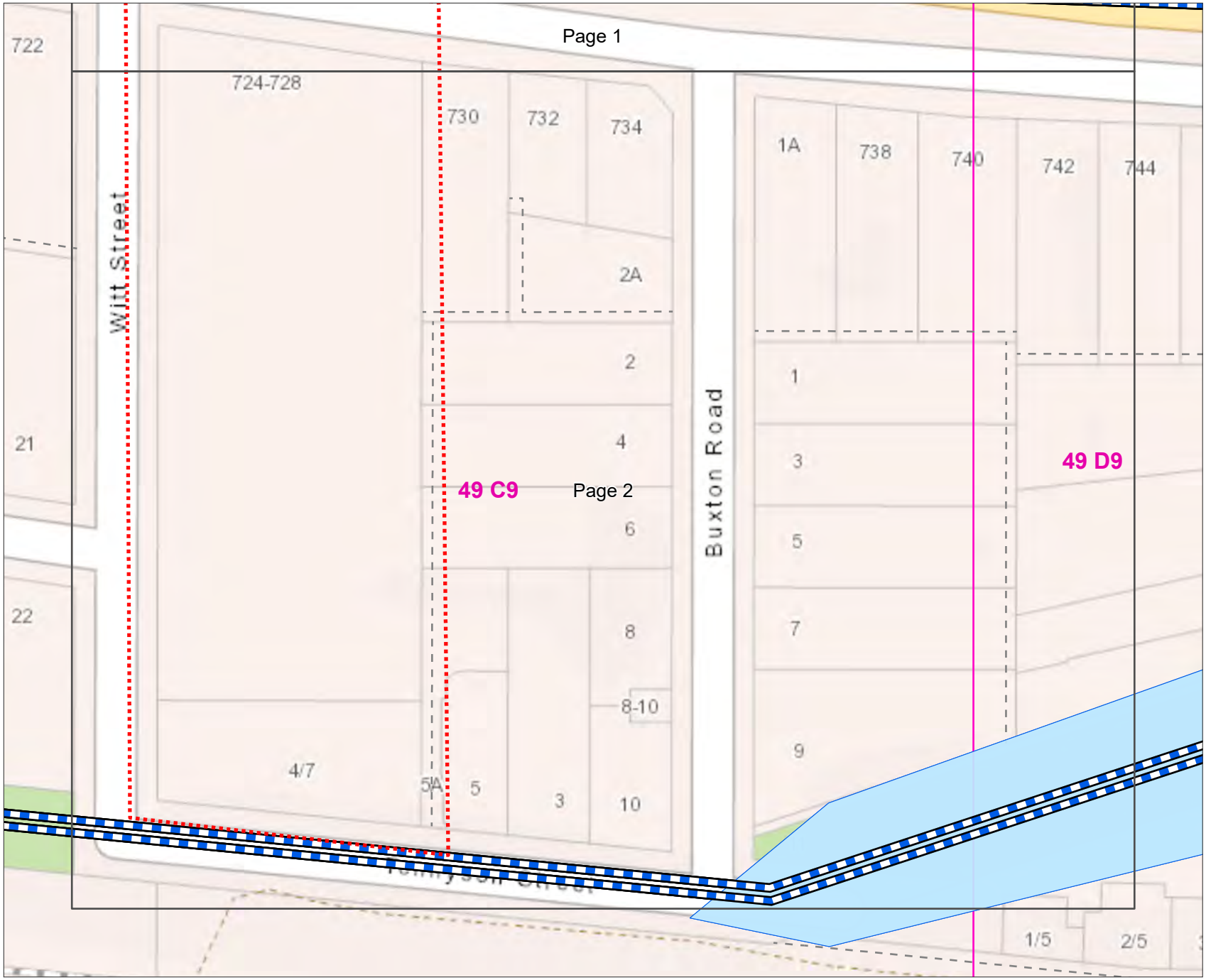

Legend

- BYDA Enquiry

Water

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- Cathodic Protection Zone

Basemap

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Vicmap Basemap Services © State of Victoria (Department of Environment, Land, Water and Planning)

Map Sheet

Plans generated by SmarterWX™

Plans generated 09/07/24 (valid for 28 days)

Metro Trains PTY

Referral
241651773

Member Phone
1800 800 007

Responses from this member

Response received Tue 9 Jul 2024 3.45pm

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ASSET 241651773.pdf	20
MTM BYDA No Assets Present 241651773.pdf	21

Attention: Richard Walsh

Thank you for your Before You Dig (BYDA) enquiry.

Job Number: 37087975

Sequence Number: 241651773

Dig Site Location:
1 Witt Street ,
Mitcham,
VIC 3132

According to our records, your enquiry with the above details **does not impact our infrastructure**.

If you require further information or assistance please contact MTM Site Access Team
at metrositeaccess@metrotrains.com.au or the MTM BYDA Team at byda@metrotrains.com.au

This enquiry is valid for 28 days from 9 July 2024 to 09/08/2024.or

Before You Dig Australia

Think Before You Dig

You have received this document in response to your enquiry with Before You Dig Australia **(BYDA)** which has determined that your area of enquiry may contain assets within the metropolitan train network **(MTM network)**. Metro Trains Melbourne Pty Ltd **(MTM)** operates the MTM network, which is owned by the Victorian State Government.

If you are working or excavating near the MTM network, or there is a chance that MTM network assets are located on or near your area of enquiry, you are responsible for avoiding any damage to the MTM network assets.

Please read this document carefully. The MTM network is complex, and access must be authorised. Proper planning, investigation and communication at this stage can help keep you and our customers safe, help protect MTM network assets, and avoid disrupting the MTM network. You may be subject to criminal penalties and civil action for damage to MTM network assets.

Please refer to the Disclaimer and Legal Notice with this document.

MTM's network is complex, assets are often located in restricted areas requiring expert knowledge and strictly authorised access for all activities including service

Follow our 5P's Below and Remember to "Plan Ahead"

**The steps outlined in the MTM BYDA Checklist below, are at "no point" an approval or permission to commence any works. The provision of these steps acts as a guide to assist you in understanding the process and pre-requisites required to obtain an approval to conduct works around MTM network assets. An MTM approved "Permit to Work" will only be issued upon satisfying all the requirements of MTM. Each step outlined is to be considered a hold point and can only be conducted once the relevant approvals have been sought and issued. Failure to comply could lead to prosecution, financial penalties, and or criminal conviction.*

MTM BYDA CHECKLIST

1. Plan - Understand your Proposed Site

The MTM rail corridor is an extremely high-risk and controlled environment. The controls are in place to protect you, our people, and our assets. Understanding this and adhering to our protocols is essential when working with MTM.
The rail corridor is the land on which the railway is built. It comprises of property typically bounded from fence-to-fence line, or if not fenced, everywhere 15 metres either side of the outermost part of the track, including rail corridor access and egress points, unless otherwise specified.

Are your planned works within the rail corridor?

YES – Apply for Metro Third Party Site Access. Follow the link: Metro Third Party Site Access Application Form

NO or UNSURE – After your planning is completed, contact MTM Third Party Site Access via email to confirm. Ensure that all relevant documents, plans, and drawings are attached. Follow the link: Metro Site Access

---

2. Prepare - Asset Validation

MTM will require additional asset location and validation to be completed, with requirements outlined by MTM specific to each enquiry. To identify and validate the precise locations of MTM network assets, all service locating must be undertaken by a DBYD Certified Locator **(DCL)** with a valid and up to date Rail Industry Worker **(RIW)** accreditation. Any person(s) performing works as part of your investigations and/or attending site meetings will require a RIW, as a minimum standard. Any service locating works that are required to be undertaken at this stage are to be passive only, no access to any MTM asset(s) including pits is permitted. If access to MTM land is required, an application for a Site Access Approval Notice **(SAAN)** must be submitted to the Metro Site Access Team. If asset(s) are not/cannot be validated, works shall not proceed.
A list of DCL's (DBYD Certified Locators) in your area can be found here: DBYD Locator
Information on how to obtain an RIW accreditation can be found here: RIW

**Please note that the above-mentioned approval can only be provided once an application has been lodged, reviewed, and the approval has been provided by MTM in the form of an Approved Notice.*

MTM BYDA CHECKLIST

3. Pothole – Positively Identify MTM Assets

All excavation works should be carefully planned, with MTM network assets positively identified using careful non-destructive digging methods *(when using hydro-vacuum excavation, do not exceed a maximum pressure of 1500PSI).*

All potholing works to identify MTM network assets will require a Notification and Approval of Excavation **(NAE)** and an Access Approval Notice **(SAAN)** when works are on MTM land, which will be provided by the Metro Site Access Team.

**Please note that both of the above-mentioned approvals can only be provided once an application has been lodged, reviewed, and the approval has been provided by MTM in the form of an Approved Notice or Permit to Work.*

4. Protect – Permit to Work

Once investigative works have been completed identifying all MTM network assets, if the proposed works impact MTM network assets and or MTM land, an application for an NAE and AAN will need to be submitted to the MTM Third Party Site Access Team. Ensure that all drawings, construction methodologies and all relevant information as outlined on the application are provided. Once received, reviewed, and approved, MTM will issue an NAE and or an AAN. No works shall commence until all approvals have been issued by MTM in the form of an Approved Notice or Permit to Work. You must comply with all conditions on the permit, including carrying out the works within the approved dates and times.

Ensure to start planning your works well ahead as access to work near the MTM network will take a **minimum of **56 days**. Complex and larger projects may require longer lead times.*

5. Proceed

Once permits and access approvals have been issued, you can proceed with the planned works. Ensure all conditions outlined on the MTM issued approvals and permits are strictly adhered to, and that works are undertaken in accordance with the ***Electrical Safety (General) Regulations (2019) (VIC), Occupational Health & Safety Act (OH&S Act) 2004, Occupational Health & Safety regulations (OH&S regulations) 2017, Worksafe Compliance Code Excavation Edition-2019-12*** and the steps outlined in this document. If the scope of works changes or unexpected ground conditions are identified, **Stop Works Immediately** as a reassessment of your works will be required. When unidentified assets are located, assets are struck or damaged, **Stop Works Immediately** and **contact Electrol 1800 443 656**. Failure to do this may result in legal proceedings, financial penalties and prosecution.

Disclaimer and Legal Notice

WARNING

MTM plans and location information conform to Quality Level D of the Australian Standard AS 5488 -Classification of Subsurface Utility Information. As such, MTM supplied location information is indicative only and may not be spatially accurate. MTM does not warrant the accuracy or completeness of the information and accepts no responsibility for any inaccuracy shown on the plans. Further on-site investigation is required to validate the exact location of MTM network assets prior to commencing construction work. An asset location service is an essential part of the process to validate the exact location of MTM network assets and to ensure the assets are protected during construction works. The exact position of MTM network assets can only be validated by physically exposing them. MTM may seek compensation for any loss that may be suffered as a result of damage to MTM network assets caused by your activity. When working in the vicinity of the MTM network, you have a "Duty of Care" that must be observed. The information in this document is provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of proposed works. You will also need to collate and understand all relevant information from other organisation and utilities, understanding that some organisations are not part of the BYDA program and make your own enquiries as appropriate. Further, if you are using excavators and other machinery check for overhead powerlines and adhere to" NO GO Zone" rules as set out by Worksafe and Energy Safe Victoria when working around overhead electrical conductors.

It is your responsibility to ensure that MTM network assets and the network are protected from damage. Please read and understand all the information contained in this document and disclaimers provided below.

Disclaimer

While MTM takes reasonable steps to ensure that the information it provides is correct, it gives no warranty regarding accuracy, completeness, currency, or suitability for a particular purpose and, to the extent permitted by law, does not accept any liability for loss or damage incurred as a result of reliance placed upon the information given. The accuracy of information provided by MTM conforms to (QL-D) Quality Level D data as defined in AS5844:2019.

QL-D is the lowest of the four quality levels. The attribute information and metadata of a subsurface utility may be compiled from any, or a combination of – (a) Existing records; (b) Cursory site inspection; and (c) Anecdotal evidence.

Attribute Information – Quality level D attribute information shall include – (a) The utility owner; (b) An indication of the utility type; (c) The date of installation (if known); (d) The condition of the utility (if known); (e) An indicative location of the surface and subsurface features of the utility. Tolerance shall not apply to an indicative location that is attributed to Quality Level D.

Metadata – Quality level D metadata shall include the following: (a) The identifier acronym, QL-D. (b) The date the data was captured. (c) The source of information.

Assumption of Risk

By receiving and using this information, including any indicative plans that are provided, you confirm that you understand and accept the risks of working near the MTM network and shall take all the necessary steps to confirm the presence, alignment and various depths of MTM network assets. The assumption of this risk is in addition to, and not in replacement of, any duties and obligations you may have under applicable law. You release MTM from any liability that might arise from your reliance on information provided by MTM.

*Note that it is a criminal offence under the Transport (Compliance and Miscellaneous) Act 1983 (Vic), to tamper or interfere with MTM network assets or trespass on land in the MTM network.

Indemnity

MTM may take action to recover costs and losses arising from damage to MTM network assets or interference with the operation of the MTM network. Losses may be suffered by MTM, the owner of the MTM network (The Victorian State Government) and customers of the MTM network. Accordingly, you indemnify MTM against any loss that may be suffered as a result of damage to MTM network assets caused by your activity.

Data Extraction Fees

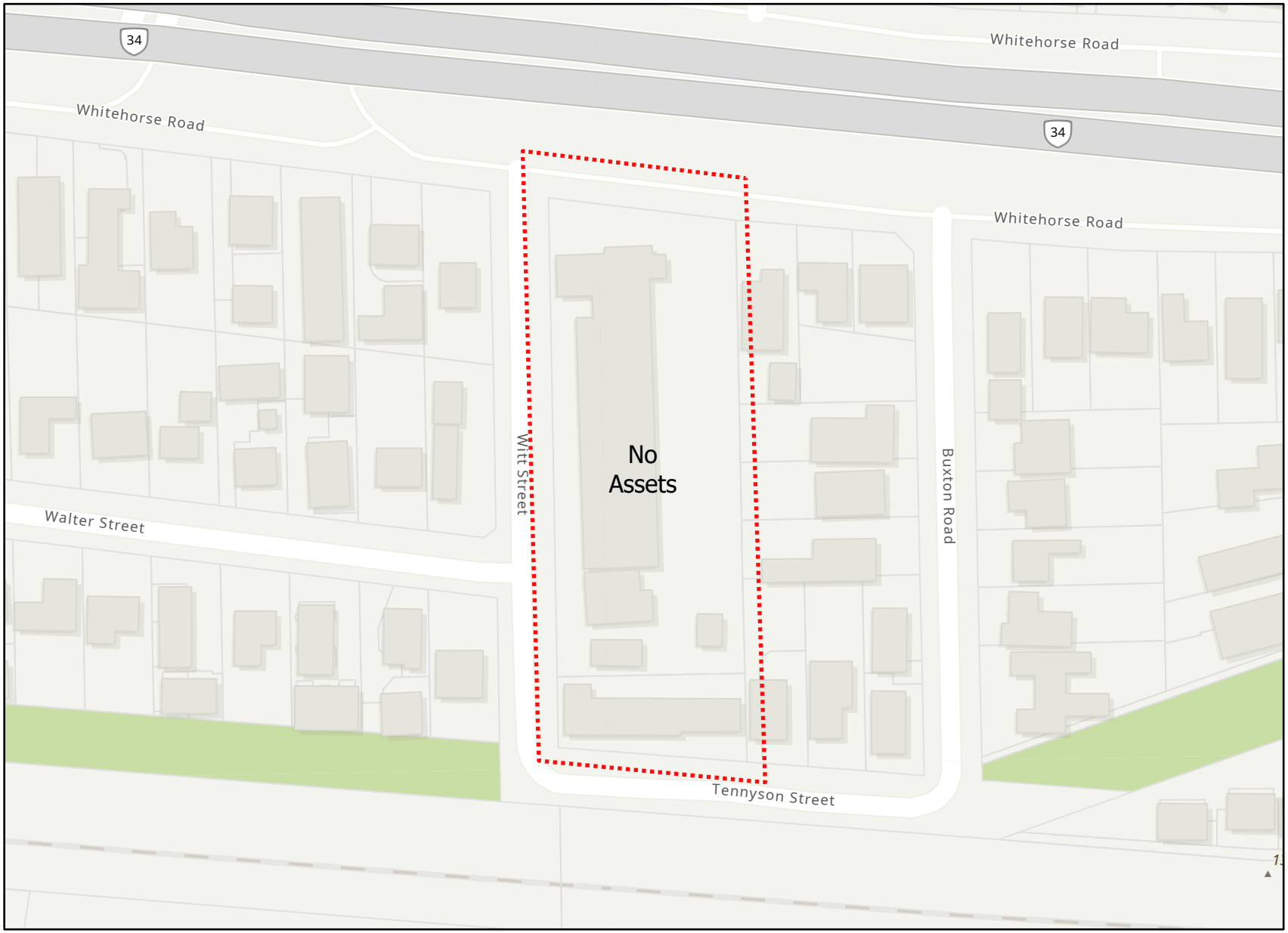
In some instances, a data extraction fee may be applicable for the supply of plans and other information.

Copyright and Permission to Use

The Victorian State Government owns and retains the copyright to all plans and other information provided in response to your request to access the MTM network. You (and your employees and contractors) are authorised to use the plans and other information provided solely for the purpose of carrying out the proposed works described in your request. You must not use the plans or other information provided for any other purpose or provide them to any person who is not authorised by you in relation to the proposed works.

Job # 37087975
Seq # 241651773

Provided by Metro Trains



Legend

BYDA Enquiry

Esri Community Maps Contributors, Vicmap, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS

Disclaimer: The Plan is provided in response to a Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of Metro Trains infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

In an emergency contact Metro Trains on 1800 443 656

Index Sheet

Plans generated by SmarterWX™ Automate

0 15 30 60 m

N

Scale 1:1,500

BYDA ENQUIRY RESPONSE

NO MTM NETWORK ASSETS IN THE ENQUIRY AREA

Attention: Richard Walsh

Job Number: 37087975
Sequence Number: 241651773

Dig Site Location:
1 Witt Street ,
Mitcham,
VIC,3132

In relation to your enquiry concerning the above location, Metro Trains Melbourne Pty Ltd **(MTM)** advises as follows:
MTM records indicate that there are **no known underground assets** in the vicinity of the above location as per attached drawing(s).

DO NOT PROCEED UNTIL YOU HAVE READ THIS NOTICE IN FULL

The information supplied by MTM is indicative only. Our records show that there are no known MTM underground assets within the area of enquiry. Onsite investigation is still required to validate the exact location of all assets prior to commencing work. A DBYD Certified Locator **(DCL)** shall be used to determine the precise location of all assets.
The asset(s) must be then physically exposed using non-destructive methods to positively identify, verify exact location(s) prior to commencing any works and to ensure that assets are protected during works. If unknown asset(s) are detected, they must be physically exposed using non-destructive methods, Electrol shall be notified immediately on 1800 442 656 and will arrange for the asset(s) to be tested and verified prior to the commencement of any works.
(Note that lead times for testing and verification vary due to resource availability).
MTM plans, and location information conform to QL-D (Quality Level D) of the Australian Standard AS5488-2019 Classification of Subsurface Utility Information.
This means that the Information is indicative only and may not be spatially accurate.
Please refer to the Disclaimer and Legal Notice for more important information.

This BYDA response is valid for 28 days from 9 July 2024 to 08/08/2024.
**A valid BYDA response is to be maintained for the duration of your works, if your works extend beyond this period, or if the designs are altered in anyway, you shall cease works immediately and re-submit your proposal to MTM for re-assessment.*

For Before You Dig Australia enquiries, please contact: MTM BYDA Team

A list of DCL's (DBYD Certified Locators) in your area can be found here: DBYD Locator
Note this response is not an authorisation from MTM to commence works.

No construction, excavation, or other activity may commence until applications have been lodged and approval(s) and or permit(s) have been issued by MTM.

METRO TRAINS MELBOURNE
GPO BOX 1880
Melbourne VIC Australia 3001

ZERO HARM
BEFORE YOU DIG www.byda.com.au
Zero Damage - Zero Harm

Disclaimer and Legal Notice

WARNING

MTM plans and location information conform to Quality Level D of the Australian Standard AS 5488 -Classification of Subsurface Utility Information. As such, MTM supplied location information is indicative only and may not be spatially accurate. MTM does not warrant the accuracy or completeness of the information and accepts no responsibility for any inaccuracy shown on the plans. Further on-site investigation is required to validate the exact location of MTM network assets prior to commencing construction work. An asset location service is an essential part of the process to validate the exact location of MTM network assets and to ensure the assets are protected during construction works. The exact position of MTM network assets can only be validated by physically exposing them. MTM may seek compensation for any loss that may be suffered as a result of damage to MTM network assets caused by your activity. When working in the vicinity of the MTM network, you have a "Duty of Care" that must be observed. The information in this document is provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of proposed works. You will also need to collate and understand all relevant information from other organisation and utilities, understanding that some organisations are not part of the BYDA program and make your own enquiries as appropriate. Further, if you are using excavators and other machinery check for overhead powerlines and adhere to" NO GO Zone" rules as set out by Worksafe and Energy Safe Victoria when working around overhead electrical conductors.

It is your responsibility to ensure that MTM network assets and the network are protected from damage. Please read and understand all the information contained in this document and disclaimers provided below.

Disclaimer

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Indemnity

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Multinet Gas

Referral
241651766

Member Phone
(03) 9535 8326

Responses from this member

Response received Tue 9 Jul 2024 4.30pm

File name	Page
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1741298_241651766_20240709_155522_001.pdf	29
1758973_M1-8685.pdf	30

Thank you for contacting Dial Before You Dig (DBYD) prior to engaging in work or activities which may be affecting infrastructure.

Job number - 37087975
Sequence number - 241651766

Dig site location -
1 Witt Street
Mitcham
VIC 3132

Attention - Richard Walsh

Attached are the files containing information relating to your Dial Before You Dig request.
For further enquiries or assistance with interpretation of plans and search content please contact our DBYD support team, the details of which are contained in the attached documents.

Please DO NOT SEND A REPLY to this email address as it has been generated by an automated system and replies are not monitored.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as-

Adobe Acrobat Reader (for PDF files).
http://get.adobe.com/reader/

Multinet Gas Distribution Partnership
ABN 53 634 214 009

Multinet Gas Networks Underground Asset Details

"Assets Affected"

BYDA Enquiries
Phone: (03) 9535 8326

Richard Walsh <rwalsh@agses.com.au>
AGS Environmental
Unit 16,25 Gipps Street
Collingwood, VIC 3066

Sequence No/s: **241651766**
Customer ID: **3228334**
Ph. No: +61477327323
Fax:
Issue Date: 9/07/2024

BYDA Location: 1 Witt Street, Mitcham, VIC, 3132

Asset Owner: **Multinet Gas**

(As per caller confirmation sheet)

The records of Multinet Gas indicate that Underground Pipes *MAY BE* present in the vicinity of and/or surrounding area of this enquiry/s. Please refer to the enclosed plan/s and read all Information and Disclaimers below and the notice on the plans.

- DBYD Gas Asset Overview 1 of 1
- M1-8685

Multinet Gas Networks (MGN) own, operate and maintain the gas distribution network in your area including gas pipes from the street up to and including the gas meter. ServiceStream are our authorised service provider who maintain the gas network on our behalf.

The person/company responsible for submitting the inquiry should take care to ensure all plans/documents listed above have been received, if there is any plan listed and not received please contact 03 9535 8326.

Multinet Gas Networks accepts no liability for the acts or omissions of person(s) carrying out works (except where such liability cannot be excluded by law). If damage occurs to any gas assets owned by Multinet Gas Networks, then Multinet Gas Networks may seek compensation from the person or legal entity responsible for the damage incurred to its gas assets, which may include costs incurred to conduct an investigation to establish the extent of the damage and the cost of surface reinstatement.

Prosecution by the relevant authorities under the Gas Industry Act (Vic) 2001 or the Gas Safety Act (Vic) 1997, as amended may also occur if gas assets are damaged.

Any information provided is valid only for 28 days from the date of issue set out above. If the work operation extends beyond this period, the information required is not for the area you will be working in, or if the designs are altered in any way, you must re-submit your proposal for re-assessment.

WARNING: It is essential that ALL these documents be handed to the principal contractor carrying out the work. A photocopy may be taken for office records. All documents must be on site at the time of excavations. The information provided is to be used as guide only and does not absolve third parties in their "Duty of Care" obligations to take additional precautions where the work has the potential to impact on gas assets and people's safety.

Enquiries relating to this response, please contact 03 9535 8326

IN THE EVENT OF A GAS EMERGENCY CALL 132 691

CONDITIONS FOR WORKS IN THE VICINITY OF MULTINET UNDERGROUND ASSETS

- **No live gas pipes shall be cut, altered or removed by you. Only MGN or its Service Provider may carry out this work.**
- **No disused gas pipes shall be cut, altered or removed without APPROVAL from Multinet Gas Networks as some live high pressure gas assets may be installed inside the old pipe. Please note that it is common industry practice to re-use the old existing metallic or plastic pipe as a conduit for the installation of a new gas service.**
- Care has been taken to ensure that the location and level of gas mains shown on our plans or given verbally are accurate, however, some variations from records do exist and complete accuracy cannot be guaranteed.
- Locations where a gas asset changes from being located within, to being located outside a casing may not always be marked on the maps provided.
- **Service lines from the gas mains outside the property, to the customer's gas meter, are not shown on the plans.**
- Gas services are usually laid at right angles from the main to meter position, except where road conduits are provided. In all instances the position of pipes should be proved on site, by hand, prior to commencement of design work and/or construction.
- **For works near gas services onsite location / assistance can be arranged by contacting ServiceStream on 03 9535 8326 at least 5 to 10 working days prior to the commencement of planned works. This service is provided free of charge to small business entities, sole traders, owners / tenants of residential / commercial property and other small organizations at Multinet Gas Networks discretion during normal working hours (7.30 am to 4pm Monday to Friday). Larger organizations may incur a fee depending on the amount of asset location work required. All requests for asset location assistance outside of normal working hours may incur a fee.**
- Special precautions must be taken in proving the location of mains. Damage to pipe coating or to the pipe itself can create a very dangerous situation over time if not given immediate attention. If damage does occur, it should be reported to Multinet Gas Networks at once.
- When plans are provided by Multinet Gas Networks, they should be used only for the work currently proposed and then destroyed. Plans become rapidly out-dated and their further use could prove to be dangerous.

1. Transmission Gas Pipelines

No excavations in areas that contain Transmission Pipelines are permitted without the prior approval of Pipelines Security – ServiceStream. Please refer to the information sheet "Conditions For Works Near Gas Transmission Pipelines" for a full list of requirements, conditions, clearances and contact numbers prior to any planning or excavations to be conducted within the area. A copy can be obtained by calling 03 9535 8326.

If present, Gas Transmission pipelines are indicated by a **RED** pipeline on the colour plan/s attached. They transport natural gas at very high pressures (up to 10,000 kPa) along routes designated by pipeline warning markers the location of which Pipeline Security – ServiceStream can provide additional information.

2. Distribution Gas Mains

Distribution mains and services operate at pressures up to 1050 kPa (Low, Medium & High Pressures). To allow for service tapping's and maintenance, every endeavour should be made to achieve the clearance dimensions given below. When this is not possible, it will be necessary to discuss the situation with ServiceStream on behalf of Multinet Gas with a view to reaching mutual agreement on alternative measures.

The following minimum clearances shall be maintained:

- **150mm** - when crossing gas mains or services with installations up to 1.5 metres wide
- **300mm** - when crossing gas mains or services with installations greater than 1.5 metres wide
- **300mm** - when installations are laid parallel to gas mains or services
- **1.0 metre** - between all gas mains or services and earthing stakes
- **1.0 metre** - between underground un-insulated electrical cables (E.g. earthing cables or stakes) laid parallel to gas mains.

Transmission Pipelines – additional clearances are required. Refer to point 1 above.

Excavating parallel to gas pipe/s - It is essential the locations of gas pipe/s are proven by careful hand excavation before machinery is within 300mm either side of the pipe/s. Pot holes shall be hand dug at regular intervals of not more than 5 meters apart to prove the actual location of the pipe/s. Minimum clearances are detailed in **point 2** above. Where the excavation depth is to exceed the pipe depth and the bedding around the pipe/s may be disturbed, ServiceStream shall be contacted.

Excavating across the gas pipe/s - It is essential the locations of gas pipe/s are proven by careful hand excavation before machinery is within 300mm either side of the pipe/s. Minimum clearances are detailed in **point 2** above. If the width or depth of the excavation is such that the pipe/s will be exposed, ServiceStream shall be contacted to determine if the pipe/s should be protected, supported or taken out of service.

Boring - Where it is required to bore across the line of the gas pipe/s, it is essential the locations of the gas pipe/s are first proven by careful hand excavation. A trench shall be dug one metre on each side of the gas pipe of the approaching auger to ensure a minimum clearance can be achieved as per **point 2** above.

Explosives - Please refer to the information sheet "*Conditions for the use of Explosives*" for a full list of requirements, conditions and clearances. A copy can be obtained by calling 03 9535 8326.

Alteration of Levels - If it is desired to increase or decrease ground levels above our gas pipe/s, please contact ServiceStream before the project commences to seek approval.

Notice is hereby given that it is an offence to uncover or damage any gas pipeline without authority (Sections 79B & 79D of the Gas Safety Act).

A legend for the drawings supplied as part of this BYDA request is provided on the next page.

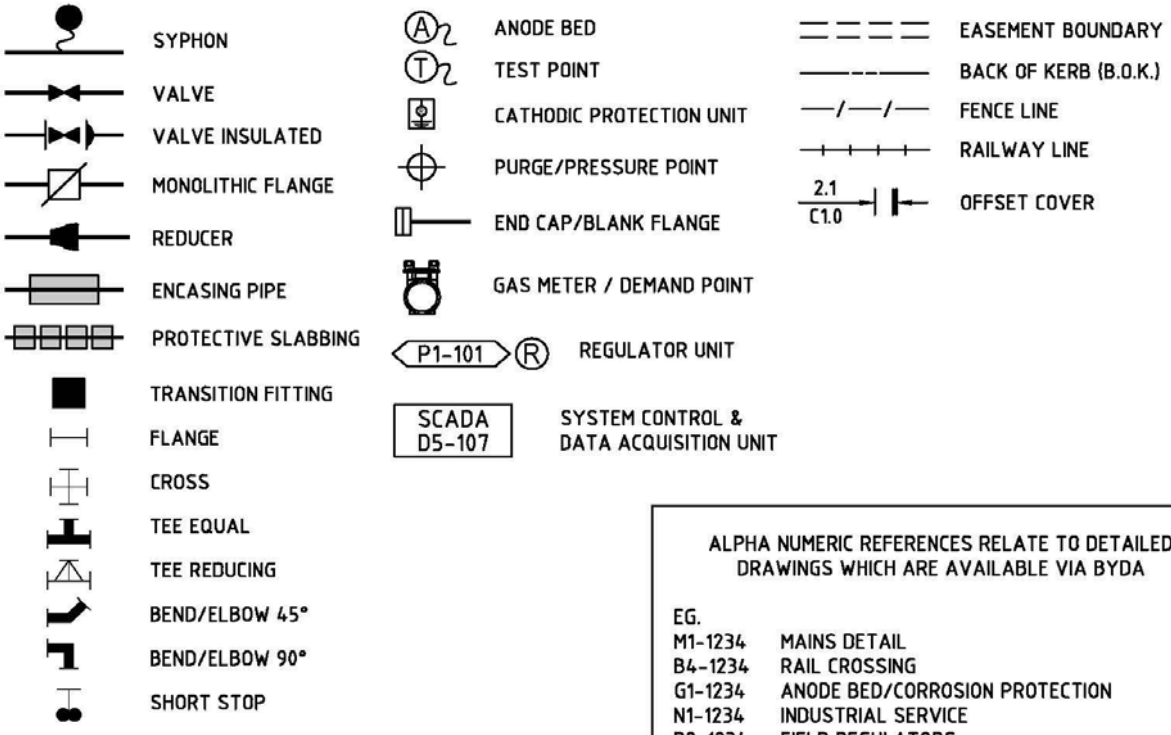
Please note that all mapping information provided as part of this BYDA request is to be treated as per AS5488-2022 Quality Level D.

PIPE CLASSIFICATION

C2	CAST IRON (UNKNOWN JOINTING TYPE)	P6	POLYETHYLENE PE80B MED. DENS IMP/MET YELLOW
C3	CAST IRON MECHANICAL JOINT	P8	POLYETHYLENE PE80B METRIC BLACK - YELLOW
C4	CAST IRON SOUTHERN MECHANICAL JOINT	P10	POLYETHYLENE PE 100 METRIC BLACK - YELLOW
C5	CAST IRON A.I.S. LEAD JOINT	S2	STEEL UNSPECIFIED UNCOATED
C6	CAST IRON METTERS CLOW MECHANICAL JOINT	S3	STEEL SCREWED ENAMEL COATED
C7	CAST IRON STAVELEY MECHANICAL JOINT	S4	STEEL WELDED ENAMEL COATED
C8	CAST IRON STANTON MECHANICAL JOINT	S5	STEEL GALVANIZED SCREWED UNCOATED
C9	CAST IRON STANTON-STAVELEY MECHANICAL JOINT	S7	STEEL WELDED PLASTIC COATED
C10	CAST IRON LEAD JOINT	S8	STEEL SCREWED PLASTIC COATED
D2	DUCTILE IRON MECHANICAL JOINT UNCOATED	S10	STEEL WELDED FUSION BONDED EPOXY COATED
P2	POLYETHYLENE HIGH DENSITY IMPERIAL YELLOW	S11	STEEL WELDED HIGH BUILD EPOXY COATED
P3	POLY VINYL CHLORIDE (P.V.C)	W2	WROUGHT IRON GALVANIZED

FITTINGS, NOTATIONS & SYMBOLS

90°/45°	BEND	L.S.	MUELLER LINE STOPPER
B.P.	BLADDER PLATE	T.S.	MUELLER SERVICE TEE
Tr	COMMON TRENCHING	T.V.	MUELLER TEE VALVE
(C.B.)	COMBINED BEND	N.I.V.	NETWORK ISOLATION VALVE
D.B.	DIRECTIONALLY BORED	S.N.I.V.	SCADA NETWORK ISOLATION VALVE
E.O.M.	END OF MAIN	N.T.I.	NOT TIED IN
F. & F.	FLANGE & FAUCET PIECE	Th.	THIMBLE
F. & S.	FLANGE & SPIGOT PIECE	Th.B.	THIMBLE BOSSED
H.B.	HORIZONTAL BEND	Th.Sp.	THIMBLE SPLIT
L.T.	LONGTHRED	Th.Sp.B.	THIMBLE SPLIT BOSSED
M.B.	MANUFACTURED BEND	(V)	VERTICAL OVER/UNDER BEND
6/21.	MONTH & YEAR PIPE LAID	W.S.	WILLIAMSON SHORT STOP
D.E.	MUELLER DEAD END EXTENSION	W.T.	WILLIAMSON TEE



ALPHA NUMERIC REFERENCES RELATE TO DETAILED DRAWINGS WHICH ARE AVAILABLE VIA BYDA

EG.

M1-1234	MAINS DETAIL
B4-1234	RAIL CROSSING
G1-1234	ANODE BED/CORROSION PROTECTION
N1-1234	INDUSTRIAL SERVICE
P2-1234	FIELD REGULATORS

REFER TO ATTACHED LEGEND

990952

8 N

LOW PRESSURE	UP TO 7 kPa	
MEDIUM PRESSURE	7 kPa - 200 kPa	
HIGH PRESSURE	100 kPa - 515 kPa	
HIGH PRESSURE 2	515 kPa - 1050 kPa	
TRANSMISSION PRESSURE	IN EXCESS OF 1050 kPa	CRITICAL FACILITIES
ISOLATED MAINS		
PROPOSED MAINS - WORK IN PROGRESS		

NOTICES

0m 40m 80m 120m 160m

SCALE: 1:2500

-:DIMENSIONS ARE IN METRES
-:PIPE SIZES ARE IN MILLIMETRES

DIAL BEFORE YOU DIG 1100

DBYD Sequence Number: 241651766

DATE OF ISSUE : 09/07/2024

FURTHER ASSISTANCE MAY BE OBTAINED IF NECESSARY BY TELEPHONING 03 9535 8326

THIS INFORMATION IS VALID FOR 28 DAYS FROM THE DATE OF ISSUE

Multinet Gas Networks

MULTINET GAS
ABN 53 634 214 009

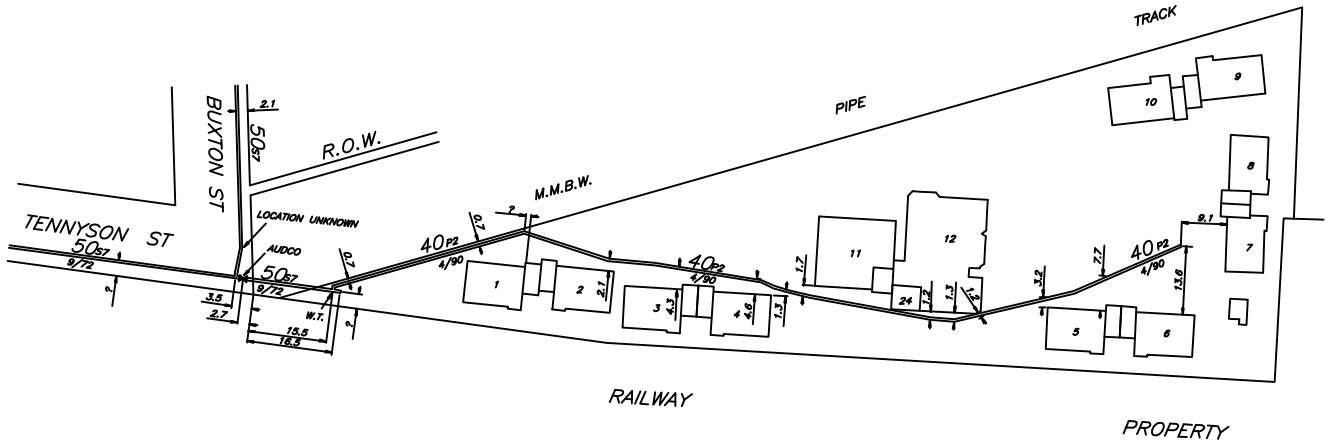
MULTINET GAS HAS TAKEN CARE TO ENSURE THAT THE LOCATIONS OF GAS MAINS SHOWN ON THIS PLAN ARE ACCURATE.

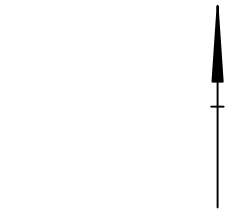
HOWEVER, SOME VARIATIONS FROM RECORDS DO EXIST AND COMPLETE ACCURACY CANNOT BE GUARANTEED.

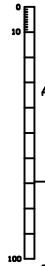
IN ALL INSTANCES IT IS ESSENTIAL THAT THE POSITION OF PIPES CONCERNED BE PROVED BY HAND EXCAVATION.

NOTICE IS HEARBY GIVEN THAT IT IS AN OFFENCE TO DAMAGE GAS COMPANY PROPERTY. (GAS INDUSTRY ACT 1994, SECTION 56)

1758973 - 241651766 - 2024-07-09 THIS INFORMATION IS VALID FOR 28 DAYS FROM THE DATE OF ISSUE.







TYPE OF PIPE

CI	CAST IRON
CIM	CAST IRON MECHANICAL JOINT
CIS	CAST IRON SOUTHERN
CIA	CAST IRON A.I.S.
CIMC	CAST IRON METTERS CLOV
CIV	CAST IRON STAVELEY
CIS	CAST IRON STANTON
CISV	CAST IRON STANTON-STAVELEY
CIL	CAST IRON LEAD JOINT
DI	DUCTILE IRON-UNCOATED
DIP	DUCTILE IRON-PLASTIC COATED
FC	FIBRO CEMENT
PE	PLASTIC POLYETHYLENE
PVC	PLASTIC POLY VINYL CHLORIDE
PP	PLASTIC PIPE OTHER - I.P.ONLY
PPI	PLASTIC IMPACT MODIFIED
MDPE	PLASTIC POLYETHYLENE (P.E.) MEDIUM DENSITY
ST	STEEL
STC	STEEL COATED & SCREVED
STW	STEEL COATED & WELDED
STG	STEEL GALVANIZED
STCG	STEEL COATED GIBAULT JOINT
STPW	STEEL PLASTIC COATED & WELDED
STPS	STEEL PLASTIC COATED & SCREVED
STI	STEEL INTERPON
STM	STEEL MAPCARD
WI	WROUGHT IRON GALVANIZED

FITTINGS AND NOTATIONS

90°	BEND
B.P.	BLADDER PLATE
C.	CAP
C.T.	CAP TAPPED
(C.B.)	COMBINED BEND
F. & F.	FLANGE & FAUCET PIECE
F. & S.	FLANGE & SPIGOT PIECE
L.T.	LONGTHREAD
M.E.	MUELLER DEAD END EXTENSION
M.S.	MUELLER LINE STOPPER
T.S.	MUELLER SERVICE TEE
T.V.	MUELLER TEE VALVE
P.L.	PROPERTY LINE
R.	REDUCER
Sd.	SADDLE
St.	STOOL
T.	TEE
T.B.	TEE BOSSED
T.Sp.	TEE SPLIT
Th.	THIMBLE
Th.B	THIMBLE BOSSED
Th.Sp.	THIMBLE SPLIT
Th.Sp.B.	THIMBLE SPLIT BOSSED
(V)	VERTICAL
W.S.	WILLIAMSON SHORT STOPP
W.T.	WILLIAMSON TEE
V12-22	SECTIONALIZATION VALVE No. 12 SECTION 22
K OR P	REGULATOR KIOSK / PIT
SCADA RS-107	SYSTEM CONTROL & DATA ACQUISITION NUMBER
RT-110	REGULATOR NUMBER
	SYPHON
	PURGE, PRESSURE POINT
	VALVE
	VALVE INSULATED
	FLANGE BLANK
	INSULATED FITTING
	ANODE BED
	CATHODIC PROTECTION UNIT
	TEST POINT
	ENCASING PIPE
	CONCRETE SLABBING
	CROSS
	PROPOSED TITLE BOUNDARY
	EASEMENT BOUNDARY
	BACK OF KERB (B.O.K.)
	FENCE LINE
C.L. 2/74	DATE MAIN CLEANED FEB. 1974
2/74	DATE MAIN LAID FEB. 1974
E.O.M.	END OF MAIN
	BELL AND SPIGOT JOINT
	MECHANICAL JOINT
	SOCKET WELDED
	SCREWED
	ROAD-CORPORATION
CP 12345, LP 12345, PS 123456 RP 12345, RCA 12345 SP 12345	SURVEY / TITLE DRAWINGS
C.T.	COMMON TRENCHING
D.B.	DIRECTIONAL BORING

ALPHA NUMERIC REFERENCES RELATE TO DETAILED DRAWINGS WHICH ARE AVAILABLE FROM THE PLAN ROOM.
EG. MI 1234 MAINS DETAIL DRAWING
12345P PROPOSED SUBDIVISION
E1 EASEMENT DRAWING

PRESSURE RANGES

LOW PRESSURE	UP TO 7kPa
MEDIUM PRESSURE	7kPa - 200kPa
HIGH PRESSURE	100kPa - 515kPa
TRANSMISSION PRESSURE	EXCESS OF 515kPa

NOTICE

MULTINET GAS HAS TAKEN CARE TO ENSURE THAT THE LOCATIONS OF GAS MAINS SHOWN ON THIS PLAN ARE ACCURATE.

HOWEVER, SOME VARIATIONS FROM RECORDS DO EXIST AND COMPLETE ACCURACY CANNOT BE GUARANTEED.

IN ALL INSTANCES IT IS ESSENTIAL THAT THE POSITION OF THE PIPES CONCERNED BE PROVED ON SITE BY HAND EXCAVATION.

NOTICE IS HEREBY GIVEN THAT IT IS AN OFFENCE TO DAMAGE GAS COMPANY PROPERTY. (GAS INDUSTRY ACT 1994, SECTION 56. TRANSMISSION PIPELINES, SECTION 58.)

DIMENSIONS ARE IN METRES
PIPE SIZES ARE IN MILLIMETRES

10 0 10 20 30 40 50
SCALE OF METRES

FIELD BOOK	
SCALE	AS SHOWN
RAILWAY REF	MAP 49-D9
DRAWN	K.KOWALCZYK DATE 30JUL91
LEVEL DATUM	
CHECKED	V.TENNAKOON DATE 30JUL91
DISTRICT PLAN NUMBER	YARRA 2500/18-11

MUNICIPALITY OF NUNAWADING

DISTRICT CENTRE : VERMONT

SURVEYED BY MULTINET GAS © COPYRIGHT 1999

L.BUNTING CHIEF ENGINEER

MI1-8685 A

NO.	REF.	DATE	REVISION	DRN.	CKD.	APP.
A	A-A	23SEP80	AAAAAAAAAA	AA.	AA.	AA.

A1

Optus and or Uecomm Vic

Referral
241651767

Member Phone
1800 505 777

Responses from this member

Response received Tue 9 Jul 2024 3.50pm

File name	Page
Response Body	32
241651767 - Optus Response Letter.pdf	33
241651767 - Optus Plan.pdf	45

Response received Tue 9 Jul 2024 3.50pm

File name	Page
Response Body	46
241651767 - Optus Response Letter (Uecomm).pdf	47
241651767 - Uecomm Plan.pdf	49
3291-1.zip	Excluded

Optus - Before You Dig Australia - REFERRAL NOTIFICATION

This referral has been successfully processed by Optus and the results are contained in the attached files.

Notice: Please DO NOT REPLY TO THIS EMAIL as it has been automatically generated and replies are not monitored.

If you have any queries or attachments missing please contact:
Network Operations Centre
1 Lyonpark Road,
Macquarie Park, NSW 2113
Ph: 1800 505 777
Fax: 1300 307 035

You will require Adobe Reader to view attachments.
http://www.adobe.com/downloads/

We thank you for your enquiry and appreciate your continued use of the “Before You Dig Australia Service” Asset Analysis Service. If you require further information in relation to Optus and/or Uemcomm cables please contact Optus on above.

This reply relates only to the location indicated above and is valid for 30 days from the sent date. Where additional works are planned that have not been specified within this reply, Optus require that an additional enquiry be submitted to Before You Dig Australia enquiry Service: http://www.byda.com.au

In the case of no additional location request being submitted, Optus will hold the relevant party responsible for any damage to Optus and/or Uecomm plant and all expenses incurred by Optus as a result of asset damage.

This e-mail may contain confidential information. If you are not the intended recipient, please notify Network Operations Centre immediately and delete this e-mail from your system. You must not disclose this e-mail to anyone without express permission from the sender. The contents of all e-mails sent to and received from Optus may be scanned, stored, or disclosed to others at Optus’ discretion.

OPTUS

BEFORE YOU DIG www.byda.com.au

Optus Contract Management Team
Unit 9, 677 Springvale Road
Mulgrave, Victoria, 3178

Date: 09 Jul 2024
To: Richard Walsh
Company: AGS Environmental
Address: Unit 16,25 Gipps Street
Collingwood, VIC 3066

ENQUIRY DETAILS
Location: 1 Witt Street, Mitcham, VIC 3132
Sequence No.: 241651767
BYDA Reference: 37087975

In relation to your enquiry concerning the above location, Optus advises as follows:

Optus records indicate that there ARE underground Optus FIBRE OPTIC TELECOMMUNICATIONS ASSETS in the vicinity of the above location as per the attached drawing(s).

PLEASE NOTE that any interference with these assets may be considered an offence under the Criminal Code Act 1995 (Cth). Optus reserves the right to seek compensation for loss or damage to its assets including consequential loss.

This reply is valid for a period of 30 days from the date above.

IMPORTANT INFORMATION
Asset location drawings provided by Optus are reference diagrams and are provided as a guide only. The completeness of the information in these drawings cannot be guaranteed. Exact ground cover and alignments cannot be provided with any certainty as these may have altered over time. Depths of telecommunications assets vary considerably as do alignments. It is essential to identify the location of any Optus assets in the vicinity prior to engaging in any works.

All Optus assets in the vicinity of any planned works will need to be electronically located to ascertain their general location. Depending on the scope of planned works in the vicinity, the assets may also need to be physically located.

YOU MUST ENGAGE THE SERVICES OF ONE OF THE OPTUS ASSET ACCREDITED LOCATORS TO CARRY OUT ASSET LOCATION (REFER LIST OF ACCREDITED LOCATORS AT THE END OF THIS OPTUS RESPONSE).

Unless otherwise agreed with Optus, where an on-site asset location is required, the requestor is responsible for all costs associated with the locating service including (where required) physically exposing the Optus asset.

DUTY OF CARE
When working in the vicinity of telecommunications assets you have a legal "Duty of Care" and non-interference that must be observed.

It is your responsibility as the requesting party (as a landowner or any other party involved in the planned works) to design for minimal impact to any existing Optus asset. Optus can assist at the design stage through consultation.

It is also your, as the requesting party (or your representative's), responsibility to:

a) Obtain location drawings (through the Before You Dig Australia process) of any existing Optus assets at a reasonable time before any planned works begin;

b) Have an Optus Accredited Asset Locator identify the general location of the Optus asset and physically locate the asset where planned works may encroach on its alignment; and

c) Contact Optus for further advice where requested to do so by this letter.

DAMAGE TO ANY OPTUS ASSET MUST BE REPORTED TO 1800 505 777 IMMEDIATELY

You, your head contractor, and any relevant subcontractor are all responsible for any Optus asset damage as a result of planned activities in the vicinity of Optus assets.

This applies where works commence prior to obtaining Optus drawings, where there is failure to follow instructions or during any construction activities.

Optus reserves the right to recover compensation for loss or damage to its assets including consequential loss. Also, you, your head contractor and any relevant subcontractor may also be liable for prosecution under the Criminal Code Act 1995 (Cth).

ASSET RELOCATIONS

You are not permitted by law to relocate, alter or interfere with any Optus asset under any circumstance. Any unauthorised interference with an Optus asset may lead to prosecution under the Criminal Code Act 1995 (Cth). Enquiries relating to the relocation of Optus assets must be referred to the relevant Optus Damages and Relocations Team (refer to "FURTHER ASSISTANCE").

APPROACH DISTANCES

On receipt of Optus asset location drawings and prior to commencing any planned works near an Optus asset, engage an Optus Accredited Locator to undertake a general location of the Optus asset.

Physical location of the Optus asset by an Optus Accredited Locator will also be required where planned works are within the following approach distances of the general location of the Optus asset:

a) In built up metropolitan areas where road and footpaths are well defined by kerbs or other features a minimum clear distance of 1 meter must be maintained from the general location of the Optus asset.

b) In non-established or unformed metropolitan areas, a minimum clear distance of 3 meters must be maintained from the general location of the Optus asset.

c) In country or rural areas where wider variations may exist between the general and actual location of an Optus asset may exist, then a minimum clear distance of 5 meters must be maintained from the general location of the Optus asset.

If planned works are parallel to the Optus asset, then the Optus asset must be physically located by an Optus Accredited Locator at a minimum of 5 meter intervals along the length of the parallel works prior to work commencing.

Under no circumstances is crossing of any Optus asset permitted without physical location of the asset being carried out by an Optus Accredited Locator. Depending on the asset involved an Optus representative may be required onsite.

The minimum clearances to the physical location of Optus assets for the following specific types of works must be maintained at all times.

Note: Where the clearances in the following table cannot be maintained or where the type of work differs from those listed then advice must be sought from the relevant Optus Damages and Relocations Team (refer to "FURTHER ASSISTANCE").

Type of Works	**Clearance to Physical Location of Optus Asset**
Jackhammers / Pneumatic Breakers	Not within 1 meter.
Light duty Vibrating Plate or Wacker Packer type compactors (not heavy road construction vibrating rollers etc.)	500mm compact clearance cover before a light duty compactor can be used over any Optus conduit. No compaction permitted over Optus direct buried cable without prior approval from Optus.
Boring Equipment (in-line, horizontal and vertical)	Not within 5 meters parallel of the Optus asset location without an Accredited Optus Asset Locator physically exposing the Optus asset and with an Optus representative onsite. Not to cross the Optus asset without an Accredited Optus Asset Locator physically exposing the Optus asset and with an Optus representative onsite.

Type of Works	Clearance to Physical Location of Optus Asset
Heavy vehicle Traffic (over 3 tonnes)	Not to be driven across Optus conduits with less than 600mm of cover. Not to be driven across Optus direct buried cable with less than 1.2 meters of cover. Once off crossings permitted, multiple crossing (e.g. road construction or logging) will require Optus approval. Accredited Optus Asset Locator to physically expose the Optus asset to verify actual depth.
Mechanical Excavators, Farm Ploughing, Vertical Hole installation for water bore or fencing etc.	Not within 1 meter. Accredited Optus Asset Locator to physically expose the Optus asset to verify actual location.

ASSET CLEARANCES AFTER COMPLETION OF WORKS

All Optus pits and manholes must be a minimum of 1 meter from the back of any kerb, 3.5 meters of the road surface without a kerb or not within 15 meters of street intersection.

In urban areas Optus conduit must have the following minimum depth of cover:

- Footway 600mm;
- Roadway 1 meter at drain invert and at road centre crown.

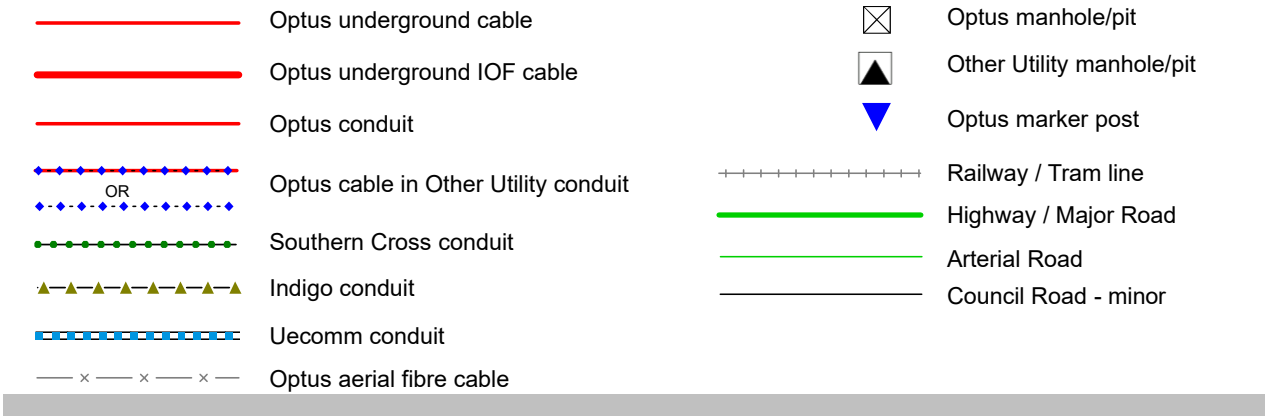
In rural areas Optus conduit must have a minimum depth of cover of 1 meter and direct buried cable 1.2 meters.

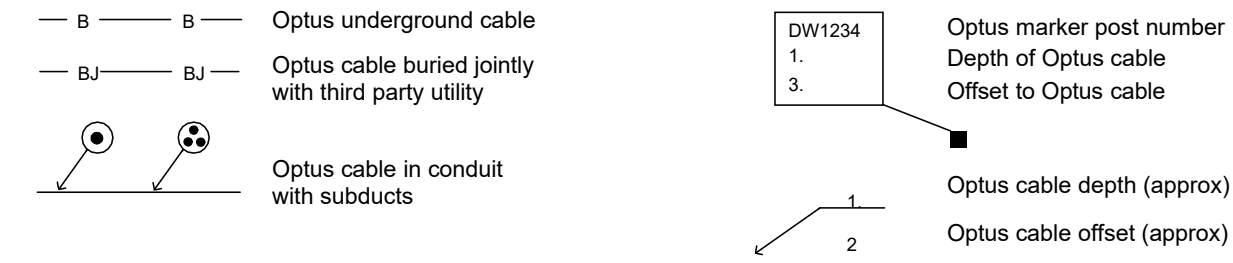
In cases where it is considered that the above clearances cannot be maintained at the completion of works, advice must be sought from the relevant Optus Damages and Relocations Team (refer "Further Assistance").

FURTHER ASSISTANCE

Further assistance on asset clearances, protection works, or relocation requirements can be obtained by contacting the relevant Optus Damages and Relocations Team on the following email address:
NFODamages&RelocationsDropbox@optus.com.au
Further assistance relating to asset location drawings etc. can be obtained by contacting the Optus Network Operations Asset Analysis Team on 1800 505 777.

OPTUS ENGINEERING DRAWING SYMBOLS





OPTUS

Optus Accredited Asset Locators

Name	Company Name	Phone	Email	State	Region/Service Area
Drew Misko	Australian Subsurface Pty Ltd	0427 879 600	admin@australiansubsurface.com	ALL	ALL
Andrew Watson	Subsurface Mapping Solutions Pty Ltd	0408 839 723	admin@subsurfacems.com.au	ALL (Not TAS)	South East QLD + Aus wide
Chris Gordon	Heavy Construction Solutions	1300 859 027	chris.gordon@heavycs.com.au	VIC,NSW,QLD,SA TAS	All
Alan Cordner	Alcom Fibre Services Pty Ltd	0400 300 337	alcomfibre@bigpond.com	NSW	Sydney, NSW
Brad McCorkindale	Bradmac Locating Services	0434 157 409	info@bradmaclocating.com.au	NSW	NSW
Shane Buckley	Cable & Pipe Locations Pty Ltd	0408730430	shane@cableandpipelocations.com.au	NSW	North Coast , Mid North Coast, Central West, Northern Rivers
Annabelle Pegler	Down Under Detection Services (DUDS)	0418 267 964	apegler@duds.net.au	NSW	All
Bruce Whittaker	Optical Fibre Technologies	0402 354 322	opticaltek1@aol.com	NSW	Sydney/Wollongong
George Koenig	Downunder Locations	0438243856	downunderlocations@gmail.com	NSW	Tweed Heads/Gold Coast
Michael Grant	M&K Grant Bega Bobcats Pty Ltd	0427 260 423	zzbobcat@bigpond.net.au	NSW	Bega, Far South Coast
Antony Critcher	Geotrace Australia Pty Ltd	0417 147 945	antony@geotrace.com.au	NSW	All Areas, Sydney, Wollongong, Newcastle, ACT
Sarah Martin	Hydro Digga	0447 774 000	admin@hydrodigga.com	NSW	Mid North Coast
Nathan Ellis	Utility Locating Services	0404 087 555	nathan@uls.com.au	NSW	Sydney
Scott O'Malley	Coastal Cable Locators Pty Ltd	0427 975 777	skomalley@bigpond.com	NSW	South Coast- Snowy Mountains- Southern Highlands
Liam Bolger	Brandon Construction Services	0438 044 008	liam.bolger@hotmail.com	NSW	Sydney
Laura Elvery	Durkin Construction Pty Ltd	02 9712 0308	info@durkin.au	NSW	NSW

Shireen Sidhu	Locate & Map	(02) 8753 0049	admin@locateandmap.com.au	NSW	Sydney & Regional NSW only
Ken Browne	Riteway Traffic Control Pty Ltd	0419 212 969	kbrowne@ritewaytc.com.au	NSW	Central Coast, Hunter
Jean-Max Monty	Civilscan	1300 575 488	john@civilscan.com.au	NSW	Sydney, Central Coast, Newcastle, Wollongong, Hunter Valley, Blue Mountains
Scott Hunter	Hunter Ground Search	0409327345	admin@hunter-groundsearch.net.au	NSW	Hunter, Upper Hunter, Central Coast, Newcastle
Damien Black	Mid North Coast Hydro Digging & Service Locating P/L	0418 409 465	djblack1@bigpond.com	NSW	Mid North Coast
Michael Nicholls	Utility Mapping NSW	1300 627 746	sydney@utilitymapping.com.au	NSW	All NSW
Joseph Restuccia	ProLocate	0415 633 393	joe.restuccia@prolocate.com.au	NSW	NSW Wide
Barry Maloney	Online Pipe & Cable Locating	1300 665 384	Office@onlinepipe.com.au	NSW	Sydney, Central Coast, Canberra, Wollongong, Newcastle
Sam Romano	Locating Services	0403 065 510	sam.romano@locatingservices.com.au	NSW	NSW All
Scott Allison	Crux Surveying Australia	02 9540 9940	sydneyoffice@cruxsurveying.com.au	NSW	Sydney Metro & Surrounding Areas
Donna Wullaert	Commence Communications Pty Ltd	02 6226 3869	admin@commencecomms.com.au	NSW	Canberra/ Yass / Bungendore/ Goulburn and surrounding regional areas
Grant Pearson	Warrabinya Services	0423 651 615	sales@warrabinya.com.au	NSW	Sydney Metro & Surrounding Areas
Stephen Fraser	Advanced Ground Locations	(02) 4930 3195	steve_agl@hotmail.com	NSW	Newcastle, Hunter Valley, Central Coast, Taree & Surrounding Areas
Andrew Findlay/ Anthony Hart	LiveLocates	0429 899 777	info@livelocates.com.au	NSW	South Coast/ACT, Snowy Mountains
Graeme Teege	Armidale Electrical	02 6772 3702	office@armidale-electrical.com.au	NSW	Armidale
Samantha Guptill	Australian Locating Services	1300 761 545	admin@locating.com.au	NSW	Sydney / Central Coast
Clay Laneyrie	Laneyrie Electrical	0411142627	bindy@laneyrieelectrical.com.au	NSW	Illawarra, South Coast, Shoalhaven, Southern Highlands

Reece Gainsford	East Coast Locating Services	0431 193 111	eastcoastlocating@hotmail.com	NSW	Sydney, Maitland, Newcastle, Hunter, Port Stephens, Central Coast
Craig Vallely	Aqua Freeze & Locate Pty Ltd	0458 774 440	service@aquafreeze.com.au	NSW	Sydney only
Jason Vane	Smartscan Locators PTY Ltd	1300 778 923	Admin@sslocators.com.au	NSW	Sydney
Alex Farcash	Newcastle Locating Services Pty Ltd	0410698599	Admin@newcastlelocatingservices.com.au	NSW	Newcastle, Hunter Valley, Central Coast, Taree & Surrounding Areas
Amer El Chami	Site Scan Pty Ltd	0449 992 520	office@sitescan.net.au	NSW	All NSW
Ian Brown	A1 Locate Services	0400 484 828	Ian.brown@a1locate.com.au	NSW	All NSW
Paul Wallis	Beveridge Williams	0431 458 878	wallisp@bevwill.com.au	NSW	Newcastle Sydney Wollongong
Cameron Handley	Wombat Underground Services	0407477038	accounts@wombatundergroundservices.com.au	NSW	ALL
Samantha Cupiado	Geoscope Utility Detection Services Pty Ltd	1300 750 350	info@geoscopelocating.com.au	NSW	All regions
Laurence Mead	Astrea Pty Ltd	1300 009 346	admin@astrea.com.au	NSW	Sydney Only
Braydon Greenwood	City Coast Services	0422432813	braydon.greenwood@live.com.au	NSW	NSW
Jim Morrison	Absolute Utilities Pty Ltd	0429 496 375	jim@absoluteutilities.com.au	NSW	Mid North Coast
Declan Dowd	Dowds Pipe And Cable Locating	0434 635 134	accounts@pipeandcable.com.au	NSW	Sydney/Wollongong/South Coast / Highlands/Soth west Sydney
Nicholas Schneider	Subsurface Utility Solutions	0421157372	nick@subsurf.com.au	NSW	Sydney only
Ricky Evans	Riverina Cable Locating	0411444980	ricky@riverinacablelocating.com.au	NSW	Riverina, Murray
Adrian Ruane	Road and Rail Excavations Pty Ltd	0414 594 063	cody@roadandrailexcavations.com.au	NSW	Sydney only
Billy Cameron	Locate Down Under Pty Ltd	0431275034	info@locatedownunder.com.au	NSW	Central Coast/ Sydney
Daniel Hudson	Geosurv Locating Pty Ltd	1300 554 675	dan@geosurv.com.au	NSW	Sydney only
Roneel Chand	JDG Civil	0416506891	sadhunaam@gmail.com	NSW	Sydney only

Tim Briggs	Deetect Locating Services	0414630852	deetect.locating@outlook.com	NSW	ACT / NSW
Sean Ferriter	Utech Solutions Pty Ltd	1300 427 614	seanf@vaughancivil.com.au	NSW	Sydney only
Mark Restuccia	Direct Connect Locating PTY LTD	0400507690	info@dclocating.com.au	NSW	NSW only
Ali Chahine	Underground Industries	0406906787	info@undergroundindustries.com.au	NSW	Sydney only
Scott Copetti	Metiri	0435 710 399	scott@metiri.com.au	NSW	Newcastle & Hunter Region
Blake Richardson	VFT	0409 210 502	b.richardson@vftes.com	NSW	NSW
Brett Pickup	BAP Services Pty Ltd	0434006009	Brett@bapservices.com.au	NSW	All Areas, Sydney, Illawarra, Newcastle, ACT
Patrick Billingham	OzDetect Pty Ltd	0497700667	patrick@ozdetect.com.au	NSW	NSW
Euan Gow	Jurovich Surveying	1300 750 000	egow@jurovichsurveying.com.au	WA/NSW/SA	All state
Jason Steger	Steger & Associates Registered Land Surveyors	0400 008 641	jason.steger@steger.com.au	ACT/NSW	ACT & Surrounds
Samuel Hathaway	Landmark Surveys	02 6280 9608	admin@landmarksurveys.com.au	NSW/ACT	ACT & Sourthen NSW
Kaisar sefian	Australian Utility Search Pty Ltd	0424 841 888	kaisar@aususearch.com.au	NSW/ACT	All NSW, ACT
Daniel Fox	Epoca Environmental Pty Ltd	1300 376 220	daniel@epocaenvironmental.com.au	NSW & ACT	All NSW & ACT
Scott Tancred	SureSearch Underground Services	1300 884 520	Scott.Tancred@suresearch.com.au	NSW/ACT QLD	NSW, Sydney, Northern NSW, Canberra, QLD, South East QLD.
Justin Martinez	LCG GLOBAL PTY LTD	0401749007	J.martinez@lcgsolutions.com.au	NSW, ACT, QLD, VIC	All regions
Troy Redden	On Point Utility Locating	1300 66 76 46	Troy@onpointlocating.com.au	NSW/QLD	Throughout both states
Geoff Campbell	CLS Locating	0450759497	geoffrey@campbellslocating.com.au	NSW/QLD	All QLD, Northern Rivers, NSW
Alexander Bogdanoff	Expert Service Locating	0420346477	info@expertservicelocating.com.au	NSW/QLD	Brisbane, Gold Coast, Sunshine Coast Northern Rivers NSW
Patrick Popovic	Site And See Pty Ltd	0479 162 692	patrick@siteandsee.com.au	QLD/NSW	South East QLD & Northern NSW

Rhys Lambert	Provac / one find cables	1300 734 772	rhys@provac.net.au	QLD	South East QLD
Paul Beaton	Cairns Asset Locations	0448 157 227	paul.beaton@clarketrenching.com.au	QLD	FNQ to NT Border
Chris Hall	D C Locators Pty Ltd	0419 679 741	dcloc@powerup.com.au	QLD	Brisbane, Ipswich
Benji Lee	LADS	0478 915 237	benji@ladsqld.com.au	QLD	South East QLD
Ian Lambert	Lambert Locations Pty Ltd	07 5562 8400	admin@lambertlocations.com.au	QLD	South East QLD & Northern NSW
Ross Clarke	FNQ Cable Locators Pty Ltd	0428 775 655	onlineco@bigpond.net.au	QLD	QLD REGION
Col Greville	Bsure Locators	0488 520 688	admin@bsurelocators.com.au	QLD	Wide Bay & Burnett; Central and Western QLD; Western Downs
Matthew Carr	Pensar	0405609739	matty.carr@pensar.com.au	QLD	Brisbane
Jimmy Wilkins	GeoRadar Asutralia Pty Ltd	0425057722	jimmy@georadar.net.au	QLD	Emerald, Bundeaberg
Craig Waite	C Locate	0437 808 444	clocate@bigpond.com	QLD	Brisbane GC SC
Jeffrey Lenehan	Syndicate Communications	0404 151 270	Jlenehan@syndicate.com.au	QLD	Brisbane
Toni O'Dell	Utility Location Services	1300 001 857	qldops@utilitylocationservices.com.au	QLD	South East QLD
Michael Jackman	Utility Mapping QLD	1300 627 746	brisbane@utilitymapping.com.au	QLD	All QLD
Jenny Dziduch	1300 Locate Pty Ltd	1300 562 283	admin@1300locate.com.au	QLD	All Queensland, Northern NSW
Brendon Smith	Advanced Locating PTY LTD	0424678823	admin@advancedlocating.com.au	QLD	Gold Coast
Samuel Hazel	Utility ID Underground Service Locators	0401 202 515	sam@utilityid.com.au	QLD	Darling Downs, South West QLD and South East QLD
Bruce Normyle	Dynamic Hydro Excavations	0434 731 933	admin@dynamicexcavation.com.au	QLD	QLD
Michael Koschel	Precision Service Locating	07 46462845	paul@pslocating.com.au	QLD	All QLD / North West NSW/South East QLD
Robert Rutledge	Safe Dig Services	+61 7 3376 0856	rrutledge@safedig.com.au	QLD	Brisbane

Michael Falla	ICUC Locating Services Pty Ltd	0410085365	michael.falla@icuclocatings-ervices.com.au	QLD	South East QLD
Ben Stephens	DTS Group TA Electros-can	0434 140 556	ben.s@electroscanqld.com.au	QLD	Queensland
Adam Lloyd	Aussie HydroVac Ser-vices	07 3287 7818	adam.lloyd@aussiehy-drovac.com.au	QLD	All
Michael Prentice	Onsite Utility Locations	0437 172 601	admin@onsiteutilityloca-tions.com.au	QLD	SEQ
Roland Mollison	LandPartners Pty Ltd	0439 488 545	roland.mollison@landpart-ners.com.au	QLD	South East Queensland
Duncan McGrath	Abletech Underground Group	0418 511 767	duncan@abletechunder-ground.com.au	QLD	QLD Wide
Daniel Poppi	Ace Cable Locations	0431517837	acecablelocations@bigpond.com	QLD	Wide Bay Burnett
Carl Molloy	Provac Melbourne	0451 104 611	melbourne@provac.net.au	VIC	Melbourne Region
Olivier Davies	Central Locating PTY LTD	0439 995 894	ollie@centrallocating.com.au	VIC	Melbourne & Western Victoria
Tina Brereton	D-Tech Ground & Over-head	03 9544 8933	tina@d-tech.net.au	VIC	ALL
Josh Taylor	Advanced Locations Vic-toria Pty Ltd	0427846716	josh@advancedloca-tionsvic.com.au	VIC	All Victoria
Ben Minutoli	Geelong Cable Locations	1800 449 543	ben@geelongcableloca-tions.com.au	VIC	Melbourne, Geelong, Country Victo-ria
Mick McGoldrick	Locate Cables	0404 241 679	mick@locatecables.com	VIC	Western Victoria
Alex Jones	Utility Mapping VIC	1300 627 746	melbourne@utilitymap-ping.com.au	VIC	All VIC
Phi Nguyen	Asset Detection Services Pty Ltd	1300 300 100	Phi.nguyen@assetdetec-tion.com.au	VIC	Melbourne/VIC
Maurice Tobin	Drain Solutions	0412 111600	info@drainsolutions.com.au	VIC	Melbourne Metro
Kate Ficker	Seeker Utility Engineer-ing	1300 733 583	admin@seekerutilityengineer-ing.com.au	VIC	All Victoria
Leigh French	Veris Australia VIC	(03) 7019 8400	melbourne@veris.com.au	VIC	Melbourne
Ben Wooldridge	Controltech Solutions	0447 760 759	ben.wooldridge@controltechsolu-tions.com.au	VIC	Melbourne

Chris Sandlant	Access Utility Engineering P/L	03 9799 8788	Chris.sandlant@accessue.com.au	VIC	Victoria & Regional
Shaun Stephen	STS Locating Services	0405 181 734	stslocatingservices@gmail.com	VIC	All VIC
Glen Foreman	Underground Services Detection Pty Ltd	0402 748 889	undergroundservices@bigpond.com	VIC	Victoria
Clinton Carver	Insight Underground Pty Ltd	0468 900 273	clinton@insightunderground.com.au	VIC	Victoria
Lindsay Botha	L B Underground Service Locations & Engineering	0499 658 677	lb.locations.engineering@gmail.com	VIC	Metro and Regional Victoria
Damien Nielsen	ELS Environmental Location Systems Pty Ltd	0499 499 137	bookings@elsvic.com.au	VIC	Victoria only
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Ashley Stevens	ABS HYDRO Pty Ltd	0422 798 476	ashley.stevens@abshydro.com.au	NSW/VIC	All of VIC, Regional NSW
Eddie Santos	Taylors Development Strategists	0488 700 155	m.tasker@taylorsds.com.au	VIC/SA/TAS	Victoria
Taryn van Dyk	Trenchless Pipelaying Contractors (TPC)	08 8376 5911	tpc@trenchlesspipelaying.com.au	SA	All
Marc Rose	SADB	0488190699	marc@sadb.com.au	SA	Adelaide only
Matthew Lewis	Adelaide Pipeline Maintenance services	0431 870 471	matt.apms@gmail.com	SA	South Australia
Deninis Stray	Pinpoint Services Mapping	(08) 8130 1600	hello@pinpointsm.com.au	SA	SA and western VIC
Liam Gill	Michael Grear Surveys	08 82788732	ugsl@mgsurveys.com.au	SA	SA
Mattew Cooper	Fulton Hogan	0447 320 581	Matthew.Cooper@fultonhogan.com.au	SA	South Australia
Liam Catchpole	APEX SERVICE LOCATING PTY LTD	0458 924 471	liam@apexvacsolutions.com.au	SA	Adelaide
Bradley Gosling	Engineering Surveys	0433506880	bgosling@engsurveys.com.au	SA	Adelaide
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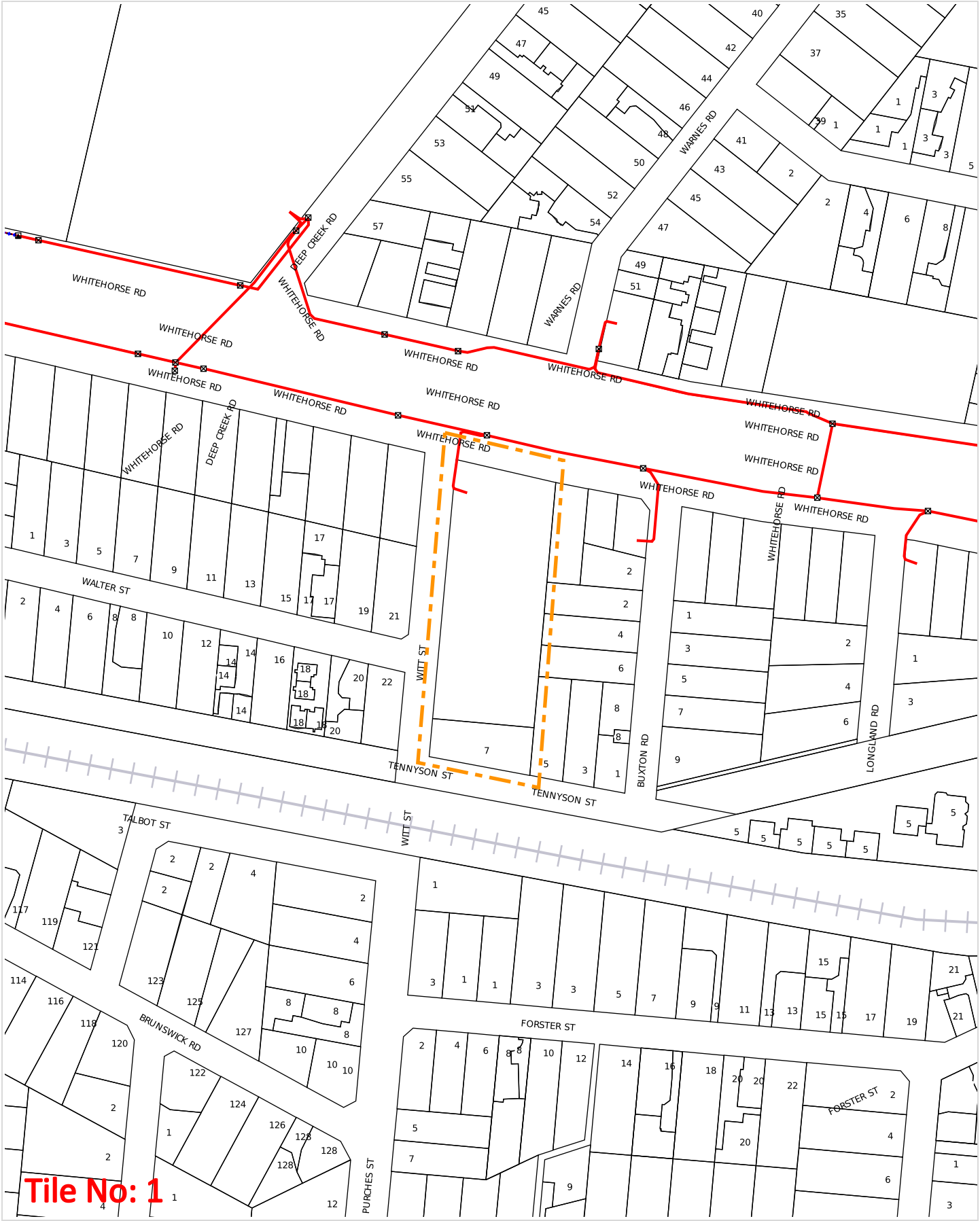
Henry Westbrook	Cable Locates & Consulting	08 9524 6600	admin@cablelocates.com.au	WA	All WA

Cameron Swift	Mikcomm Communication	08 9337 1125	cswift@mikcomm.com.au	WA	All
Tobi Lawrence-Ward	Abaxa	08 9256 0100	enquiries@abaxa.com.au	WA	Perth, Southwest, Western Australia
Ben Upton	TerraVac Vacuum Excavation	0433 374 802	locations@terravac.com.au	WA	Perth
Dale Shearsmith	Subtera	1300 046 636	dale@subtera.com.au	WA	WA
Cheron Ingram	Bunbury Telecom Service Pty Ltd	08 9726 0088	cheron@btswa.com.au	WA	WA
Drew Monkhouse	Utility Mapping WA	1300 627 746	perth@utilitymapping.com.au	WA	All WA
Edel O'Connor	Kier Contracting	0456 190 910	edel@kier.com.au	WA	Perth Metro & greater region; Regional WA
Nigel Nunn	CCS Group / Utility Locating Solutions	08 9385 5000	enquiry@ccswa.com.au	WA	Perth
Jeremy Brown	Spotters Asset Locations Pty Ltd	0459 130 677	jeremy@spottersassetlocations.com.au	WA	All
Reece Topham	Prime Locate	0400 888 406	reece@primelocate.com.au	WA	All
Rhyce Murphy	RM Surveys	08 9457 7900	rhyce.murphy@rmsurveys.com.au	WA	All
James Horton	Westscan Pty Ltd	1300 858 404	westscan1@gmail.com	WA	All
Ashleigh Austin	Veris WA	0419 024 696	perth@veris.com.au	WA	Perth Metro & Regional
Suhairee Suhaimi	BCE Spatial	08 9791 7411	harry@bcespatial.com.au	WA	WA
Tim Daws	Award Contracting Pty Ltd	0411 878 895	info@awardcontracting.com.au	WA	Metro & Country Regions
Stephen Steart	Cabling WA Pty Ltd	0422 845 586	ssteart@cablingwa.com.au	WA	Perth Metro
Devvyn Barto	Pulse Locating	0431402738	devvyn.barto@pulselocating.com.au	WA	Western Australia
Josh Pool	Utility Mapping NT	1300 627 746	darwin@utilitymapping.com.au	NT	All NT
Stuart Speckman	FYFE	08 8944 7888	Stuart.Speckman@fyfe.com.au	NT/SA/NSW	NT/SA/NSW

Wayne Parslow	Danisam	0417 089 865	danisam@westnet.com.au	NT	Darwin NT and Surrounds
Scott Crerar	Paneltec Group	0400 895 637	scott@paneltec.com.au	TAS	All



WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed, please raise a new enquiry.

Sequence Number: 241651767

Date Generated: 09 Jul 2024

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

Optus - Before You Dig Australia - REFERRAL NOTIFICATION

This referral has been successfully processed by Optus and the results are contained in the attached files.

Notice: Please DO NOT REPLY TO THIS EMAIL as it has been automatically generated and replies are not monitored.

If you have any queries or attachments missing please contact:
Network Operations Centre
1 Lyonpark Road,
Macquarie Park, NSW 2113
Ph: 1800 505 777
Fax: 1300 307 035

You will require Adobe Reader to view attachments.
http://www.adobe.com/downloads/

We thank you for your enquiry and appreciate your continued use of the “Before You Dig Australia Service” Asset Analysis Service. If you require further information in relation to Optus and/or Uemcomm cables please contact Optus on above.

This reply relates only to the location indicated above and is valid for 30 days from the sent date. Where additional works are planned that have not been specified within this reply, Optus require that an additional enquiry be submitted to Before You Dig Australia enquiry Service: http://www.byda.com.au

In the case of no additional location request being submitted, Optus will hold the relevant party responsible for any damage to Optus and/or Uecomm plant and all expenses incurred by Optus as a result of asset damage.

This e-mail may contain confidential information. If you are not the intended recipient, please notify Network Operations Centre immediately and delete this e-mail from your system. You must not disclose this e-mail to anyone without express permission from the sender. The contents of all e-mails sent to and received from Optus may be scanned, stored, or disclosed to others at Optus’ discretion.

Richard Walsh
To: AGS Environmental
Unit 16,25 Gipps Street
Collingwood, VIC 3066

Uecomm Pty Limited
ABN 56 079 083 195

Building 8, 658 Church St,
Richmond, VIC 3121
Ph: (03) 9221 4100
Fax: (03) 9221 4193
Ah: 1800 707 447

LOCATION OF UNDERGROUND FIBRE OPTIC CABLE INFORMATION SHEET

IMPORTANT: PLEASE READ ALL INFORMATION AND CONDITIONS BELOW AND THE NOTICE ON THE REVERSE SIDE OF THE PLAN/S.

"Before You Dig Australia" Sequence No 241651767	**Issue Date:** 09 Jul 2024
Customer ID 220334	**Issue By:** Optus and or Uecomm Vic

Location: 1 Witt Street, Mitcham, VIC 3132
Uecomm Asset Location No. 3291-1
Before You Dig Australia Job No. 37087975

In relation to your enquiry at the above address, Uecomm advises as follows:

The records of Uecomm Limited disclose that there ARE underground FIBRE OPTIC / TELECOMMUNICATIONS cables in the vicinity of the above enquiry as per attached plan/s.

- The underground cables referred to in this advice are defined as the underground communications cables owned or controlled by Uecomm Pty Limited.
- The person/company responsible for submitting the inquiry should take care to ensure all plans listed above have been received. For any plan listed above but not received please contact **1800 707 447**.
- Any information provided is valid only for **30 days** from the date of issue set out above.
- If the work operations extend beyond this period, or if the designs are altered in any way, you are requested to resubmit your proposal for reassessment.
- Further assistance may be obtained if necessary, by telephoning **1800 707 447**.

PLEASE READ ALL INFORMATION AND DISCLAIMERS BELOW:

1. Due to the nature of underground cables and the age of some cables and records, it is impossible to conclusively ascertain the location of all cables. The accuracy and/or completeness of the information cannot be guaranteed and, accordingly, they are intended to be indicative only and, as a result, Uecomm does not accept any responsibility for any inaccuracies of its plans. They should not be solely relied upon when undertaking underground works. It is also inaccurate to assume that fibre optic cables follow straight lines and careful on-site investigations are essential to locate its exact position.
2. The following minimum clearances must be maintained:
    - 300mm when laying asset's inline, horizontal or vertical.
    - 500mm when operating vibrating equipment, e.g., jackhammers or vibrating plates.
    - 1000mm when operating mechanical excavators.
3. Due to the inherent dangers associated with excavation in the vicinity of underground cables, precautions should be taken in the undertaking of any underground works, including (but not limited to) the following:
    - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likely hood of damage to the cable, e.g., blades of hand equipment should be orientated parallel to the line of the cable rather than digging across the cable.
    - If any undisclosed underground cables are located, Uecomm Limited should be notified immediately.
    - All personnel must be properly briefed, particularly those associated with the use of earthmoving equipment, trenching, boring and pneumatic equipment.
    - All excavations must be undertaken in accordance with the relevant legislation and regulations.

4. **DAMAGE. ANY DAMAGE TO UECOMM'S NETWORK MUST BE REPORTED IMMEDIATELY TO 1800 707 447.**
5. Uecomm recommends using Uecomm approved location contractors to provide on-site location services for Uecomm plant. You can arrange Uecomm on-site visits by calling Uecomm on 1800 707 447 and Uecomm or its approved representative will attend your site to provide guidance to the location of the Uecomm assets (the "Uecomm Asset Alignment"). **Uecomm requires 3 clear business days' notice to conduct an on-site location**. The initial on-site visit by Uecomm will not normally incur a charge, but at the discretion of Uecomm, subsequent site visits may incur a charge to be applied at an hourly rate.
6. Uecomm will hold the relevant party responsible for any damage to Uecomm plant and all expenses incurred by Uecomm as a result of asset damage.
7. Except to the extent that liability may not be capable of lawful exclusion, Uecomm Pty Limited and its servants and agents and the related bodies corporate of Uecomm Pty Limited and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any Plans attached hereto. Except as expressly provided to the contrary in this information sheet or the attached Plans, all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

We thank you for your enquiry and appreciate your continued use of the Before You Dig Australia and/or Uecomm Asset Analysis Service. If you require further information, please contact Uecomm on **1800 707 447**.

IMPORTANT *This document may be confidential and privileged. Unauthorised use is prohibited. If you have it in error, please notify us and shred this document. Thank you.*

Uecomm Underground Cable

Scale: 1:2500

Printed on: 09 Jul 2024

Sequence Number: 241651767

Location: 1 Witt Street, Mitcham, VIC 3132

Job Location
Line
Point
Area

Undergound Asset
Uecomm

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Referral
241651771

Member Phone
1800 653 935

Responses from this member

Response received Tue 9 Jul 2024 3.53pm

File name	Page
Response Body	51
Telstra Map Legend 4.0a.pdf	53
AccreditedPlantLocators 2024-06-21a.pdf	54
241651771.pdf	55
Telstra Duty of Care v32.0a.pdf	57

Attention: Richard Walsh

Site Location: 1 Witt Street, Mitcham, VIC 3132

Your Job Reference: AGS240210

Please do not reply to this email, this is an automated message -

Thank you for requesting Telstra information via Before You Dig Australia (BYDA).

This response contains Telstra information relating to your recent BYDA request.

Information for opening Telstra Asset Plans as well as some other useful contact information is listed in the attached **Telstra Map Legend attached**.

Please refer to all enclosed attachments for more information.
Please Report Damage to Telstra Equipment: Report damages to Telstra equipment - Telstra

Please note:
When working in the vicinity of telecommunications plant you have a 'Duty of Care' that must be observed.
Please ensure you read the 'Telstra Duty of Care' document (attached) - it contains important information including essential steps that must be undertaken prior to commencing construction activities.

WARNING - MAJOR CABLES and/or OPTIC FIBRE IN THE AREA.
Phone 1800 653 935 for further assistance.

Note: In some areas Telstra fibre routes may be marked as "Amcom", as Telstra has purchased much of this infrastructure. If in doubt, please contact Telstra Plan services on the number above. Telstra plans and information are only valid for 60 days from the date of issue.

WARNING:
Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing them. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra assets prior to commencing work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. See the Steps - Working Near Telecommunications Assets (attached Telstra Duty of Care).
Please note that:
- it is a criminal offence under the *Criminal Code Act* 1995 (Cth) to tamper or interfere with telecommunications infrastructure.
- Telstra will take action to recover compensation for damage caused to property and assets, and for interference with the operation of Telstra's networks and customers' services.

Telstra's plans contain Telstra's confidential information and are provided on the basis that they are used solely for identifying the location or vicinity of Telstra's infrastructure to avoid damage to this infrastructure occurring as part of any digging or other excavation activity. You must not use Telstra's plans for any other purpose or in a way that will cause Telstra loss or damage and you must comply with any other terms of access to the data that have been provided to you by Telstra (including Conditions of Use or Access).

(See attached file: Telstra Duty of Care v32.0a.pdf)

(See attached file: Telstra Map Legend 4.0a.pdf)

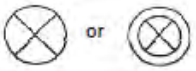
(See attached file: AccreditedPlantLocators 2024-06-21a.pdf)

(See attached file: 241651771.pdf)

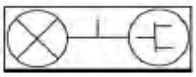
LEGEND

Exchange
(Major Cable Present)

Footway Access Chamber
(can vary from 1-lid to 12-lid)



Pillar / Cabinet
(above ground / free standing)



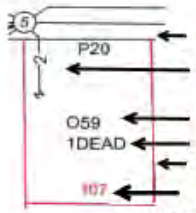
Above ground complex equipment housing (eg RIM)
Please Note: This equipment is powered by 240V Electricity

OC — Other Carrier Telecommunications Cable/Asset

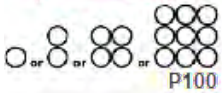
Dist — Distribution cables in Main Cable ducts

MC — Main Cable ducts on a Distribution plan

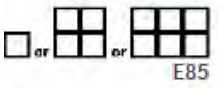
▲ — Blocked or damaged duct.



Roadside / Front Boundary
2 pair lead-in to property from pit in street 1
pair working (pair ID 059)
1 pair dead (i.e. spare, not connected)
Side / Rear Property Boundary
Property Number



Single to multiple round conduit
Configurations 1,2,4,9 respectively
(attached text denotes conduit type and size)



Multiple square conduit
Configurations 2, 4, 6 respectively
(attached text denotes conduit type and size)

Cable Jointing Pit
(number / Letter indicating Pit Type)

Elevated Joint
(above ground joint on buried cable)

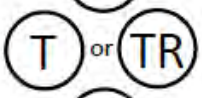
Telstra Plant in shared Utility trench

Aerial Cable

Aerial Cable
(attached to joint Use Pole eg. Power)

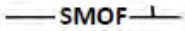
Direct Buried Cable

Marker Post Installed



Buried Transponder

Marker Post, Transponder

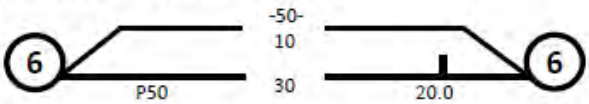


Optical Fibre cable direct buried

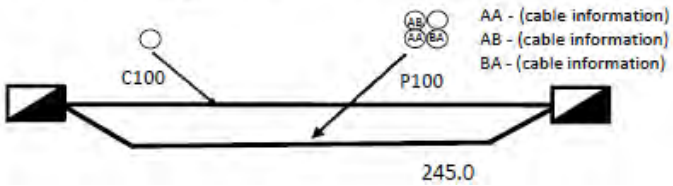
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galanised iron, E - Earthenware
Conduit sizes *nominally* range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6-pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route



AA - (cable information)
AB - (cable information)
BA - (cable information)

Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along

Protect our Network:

by maintaining the following distances from our assets:

- 1.0m Mechanical Excavators, Farm Ploughing, Tree Removal
- 500mmVibrating Plate or Wacker Packer Compactor
- 600mm Heavy Vehicle Traffic (over 3 tonnes) not to be driven across Telstra ducts or plant.
- 1.0mJackhammers/Pneumatic Breakers
- 2.0m Boring Equipment (in-line, horizontal and vertical)

For more info contact a Certified Locating Organisation or Telstra Plan Services 1800 653 935

General Information

OPENING ELECTRONIC MAP ATTACHMENTS –

Telstra Cable Plans are generated automatically in either PDF or DWF file types.
Dependent on the site address and the size of area selected.
You may need to download and install free viewing software from the internet e.g.

DWF Map Files (all sizes over A3)
Autodesk Viewer (Internet Browser) https://viewer.autodesk.com/ or
Autodesk Design Review http://usa.autodesk.com/design-review/ for DWF files. (Windows PC)

PDF Map Files (max size A3)
Adobe Acrobat Reader http://get.adobe.com/reader/

Telstra BYDA map related enquiries email
Telstra.Plans@team.telstra.com
1800 653 935 (AEST Business Hours only)

REPORT ANY DAMAGE TO THE TELSTRA NETWORK IMMEDIATELY
Report online - https://www.telstra.com.au/forms/report-damage-to-telstra-equipment
Ph: 13 22 03
If you receive a message asking for a phone or account number say: "I don't have one" then say "Report Damage" then press 1 to speak to an operator.

Telstra New Connections / Disconnections
13 22 00

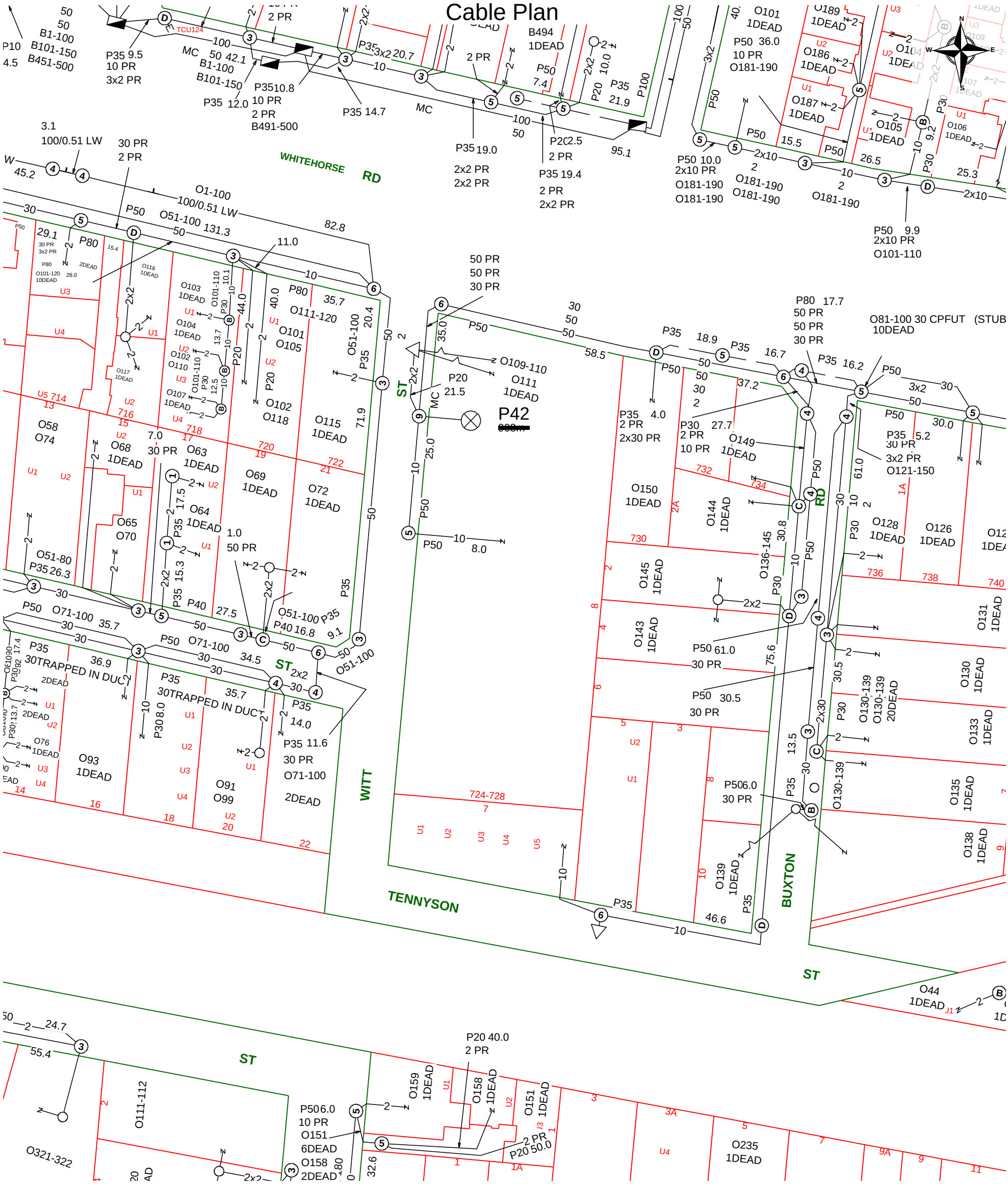
Telstra asset relocation enquiries: 1800 810 443 (AEST business hours only).
NetworkIntegrity@team.telstra.com
https://www.telstra.com.au/consumer-advice/digging-construction

Telstra Aerial Assets Group (overhead network)
1800 047 909

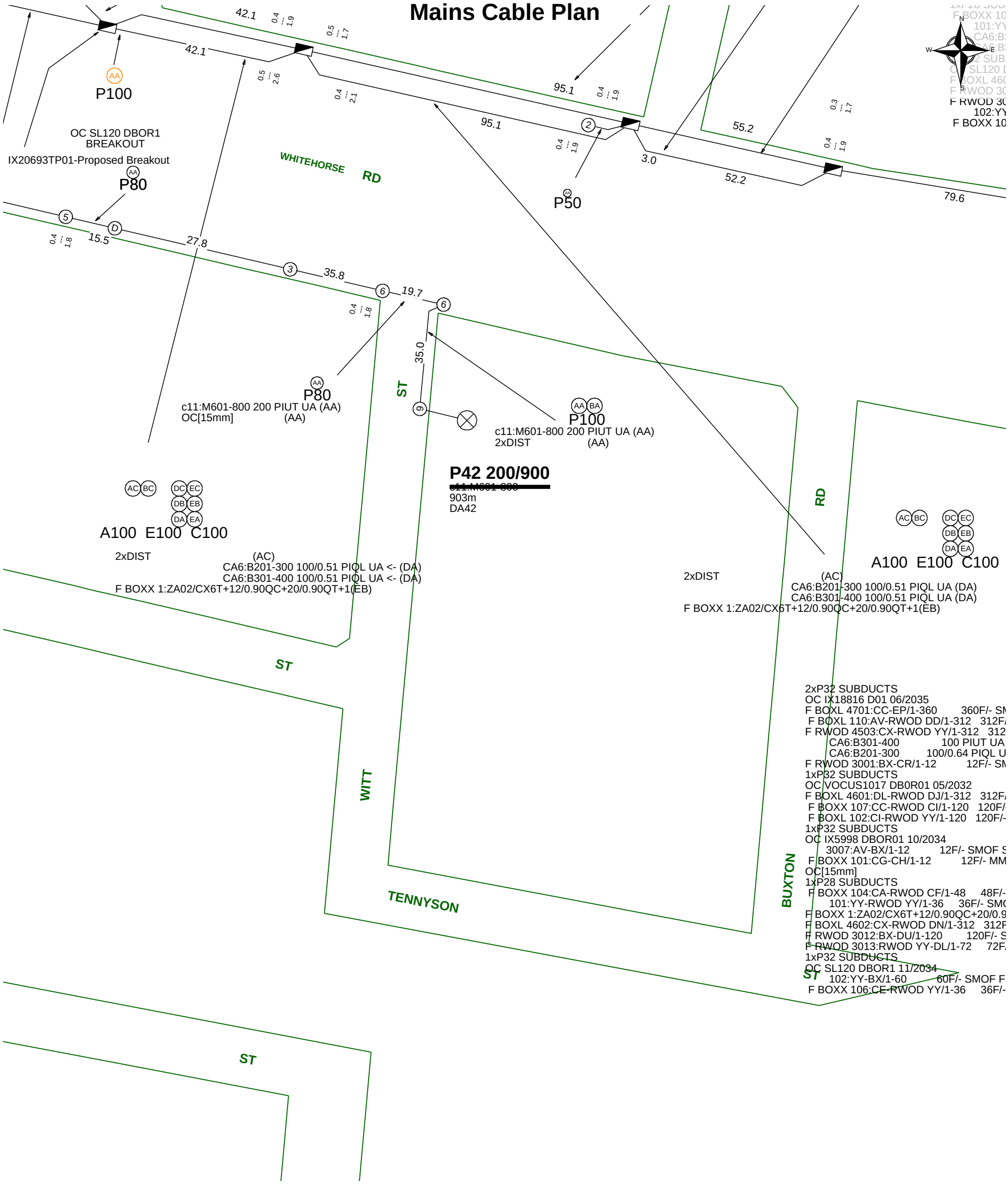
DBYDCertification

Certified Locating Organisation (CLO)
https://dbydlocator.com/certified-locating-organisation/

Cable Plan


WHITEHORSE RD
WITT ST
TENNYSON ST
BUXTON RD
MC
P42
O81-100 30 CPFUT (STUB 10DEAD
O58
O74
O68 1DEAD
O63 1DEAD
O64 1DEAD
O65
O70
O69 1DEAD
O72 1DEAD
O51-80
O71-100
O93 1DEAD
O91
O99
O76 1DEAD
O101 O105
O102 O118
O111-120
O115 1DEAD
O109-110
O111 1DEAD
O150 1DEAD
O144 1DEAD
O145 1DEAD
O143 1DEAD
O149 1DEAD
O136-145
O128 1DEAD
O126 1DEAD
O131 1DEAD
O130 1DEAD
O130-139
O130-139 20DEAD
O133 1DEAD
O135 1DEAD
O138 1DEAD
O139 1DEAD
O44 1DEAD
O111-112
O321-322
O159 1DEAD
O158 1DEAD
O151 1DEAD
O235 1DEAD
O101 1DEAD
O189 1DEAD
O186 1DEAD
O187 1DEAD
O105
O106 1DEAD
O107 1DEAD
O109 1DEAD
O104 1DEAD
P50 36.0 10 PR O181-190
P50 10.0 2x10 PR O181-190 O181-190
P50 9.9 2x10 PR O101-110
P35 9.5 10 PR 3x2 PR
P35 12.0
P35 10.8 10 PR 2 PR B491-500
P35 14.7
P35 19.0 2x2 PR 2x2 PR
P35 19.4 2 PR 2x2 PR
B494 1DEAD
P50 7.4
P20 10.0
P35 21.9
P100
95.1
3.1 100/0.51 LW
30 PR 2 PR
O1-100 100/0.51 LW
O51-100 131.3
82.8
11.0
50 PR 50 PR 30 PR
P20 21.5
35.0
25.0
8.0
P35 4.0 2 PR 2x30 PR
P30 27.7 2 PR 10 PR
37.2
58.5
P80 17.7 50 PR 50 PR 30 PR
P35 16.2
P35 5.2 30 PR 3x2 PR O121-150
P50 61.0 30 PR
P50 30.5 30 PR
P506.0 30 PR
P506.0 10 PR O151 6DEAD
O158 2DEAD
P20 40.0 2 PR
P20 50.0 2 PR
P35 46.6
P35 30TRAPPED IN DUCT
P35 14.0
P35 11.6 30 PR O71-100 2DEAD
P40 27.5
P40 16.8
P35 26.3
P35 18.9
P35 16.7
P35 16.2
P35 15.3
P35 17.5
P35 9.1
P35 13.7
P35 10.1
P35 12.5
P35 7.0 30 PR
P35 1.0 50 PR
P35 2.5 2 PR 2x2 PR
P35 3x2 20.7
P35 2 PR
P35 2 PR 10 PR
P35 2 PR 2 PR B491-500
P35 3x2 PR O121-150
P35 2 PR 2x30 PR
P35 2 PR
P35 30 PR
P35 2 PR
P35 2 PR
P35 2

Mains Cable Plan



Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 241651771
TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
Generated On 09/07/2024 15:53:08	

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Before You Dig Australia

Think before you dig

This document has been sent to you because you requested plans of the Telstra network through Before You Dig Australia (BYDA).

If you are working or excavating near telecommunications cables, or there is a chance that cables are located near your site, you are responsible to avoid causing damage to the Telstra network.

Please read this document carefully. Taking your time now and following the steps below can help you avoid damaging our network, interrupting services, and potentially incurring civil and criminal penalties.

Our network is complex and working near it requires expert knowledge. Do not attempt these activities if you are not qualified to do so.

Disclaimer and legal details

*Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013.

It is a criminal offence under the Criminal Code Act 1995 (Cth) to tamper or interfere with telecommunications infrastructure.

Telstra will also take action to recover costs and damages from persons who damage assets or interfere with the operation of Telstra's networks.

By receiving this information including the indicative plans that are provided as part of this information package you confirm that you understand and accept the risks of working near Telstra's network and the importance of taking all the necessary steps to confirm the presence, alignments and various depths of Telstra's network. This in addition to, and not in replacement of, any duties and obligations you have under applicable law.

When working in the vicinity of a telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

The Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project, it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

This Notice has been provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of interest. You will also need to collate and understand all of the information received from other Utilities and understand that some Utilities are not a part of the BYDA program and make your own enquiries as appropriate. It is the responsibility of the entities undertaking the works to protect Telstra's network during excavation / construction works.

Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.

Telstra plans or other details are provided only for the use of the applicant, its servants, agents, or Certified Locating Organisation. The applicant must not give the plans or details to any parties other than these and must not generate profit from commercialising the plans or details.

Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.

Please ensure Telstra plans and information provided always remains on-site throughout the inspection, location, and construction phase of any works.

Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.

Data Extraction Fees

In some instances, a data extraction fee may be applicable for the supply of Telstra information. Typically, a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Planned Services.

Telstra does not accept any liability or responsibility for the performance of or advice given by a Certified Locating Organisation. Certification is an initiative taken by Telstra towards the establishment and maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

Neither the Certified Locating Organisation nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Certified Locating Organisation or its employees.

Once all work is completed, the excavation should be reinstated with the same type of excavated material unless specified by Telstra

The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

When using excavators and other machinery, also check the location of overhead power lines.

Workers and equipment must maintain safety exclusion zones around power lines

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK. A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. The exact position of Telstra assets can only be validated by physically exposing them. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Privacy Note

Your information has been provided to Telstra by BYDA to enable Telstra to respond to your BYDA request. Telstra keeps your information in accordance with its privacy statement. You can obtain a copy at www.telstra.com.au/privacy or by calling us at 1800 039 059 (business hours only).

United Energy

Referral
241651768

Member Phone
1300 131 689

Responses from this member

Response received Tue 9 Jul 2024 8.17pm

File name	Page
Response Body	60
241651768 - United Energy Response letter.pdf	61
241651768 - United Energy Response Plan.pdf	64
UE5-70-198.TIF	65
UE5-2006505.pdf	66
T1-195-403.pdf	67
UE5-BUR-211874-3.pdf	68
BS-7025.pdf	69
UE5-70-5065.TIF	70
UE5-06-7774.TIF	71
UE15-BUR-211874-3.pdf	72
UE5-19-174464.pdf	73

Thank you for contacting Before You Dig Australia (BYDA) prior to engaging in work or activities which may be affecting infrastructure.

Job No: 37087975
Sequence No: 241651768
Dig Site location:
1 Witt Street
Mitcham
VIC 3132

Attention - Richard Walsh

THE ATTACHED FILES CONTAIN IMPORTANT INFORMATION RELATING TO YOUR BYDA REQUEST. PLEASE REVIEW THESE CAREFULLY.

For further enquiries or assistance with interpretation of plans and search content please contact our BYDA support team, the details of which are contained in the attached documents.

Please DO NOT SEND A REPLY to this email address as it has been generated by an automated system and replies are not monitored.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as-
Adobe Acrobat Reader (for PDF files).
http://get.adobe.com/reader/

United Energy Distribution Pty Limited
ABN 70 064 651 029

UNITED ENERGY
UNDERGROUND CABLES DETAILS

ASSETS AFFECTED

Richard Walsh
AGS Environmental
Unit 16,25 Gipps Street
Collingwood VIC 3066

Sequence No: **241651768**
Date of Issue: 09/07/2024
Phone: +61477327323

DBYD Location: 1 Witt Street, Mitcham, VIC 3132

DBYD Asset Owner Registration: United Energy

The records of United Energy indicate that Underground Cables owned or controlled by United Energy ARE present in the vicinity of the above location.

Please carefully refer to the plans per the following Reference Plans section of this letter (and/or as attached) and read all information and disclaimers below and on the plans, which by receipt of this letter you will be deemed to have read, understood and agreed to.

Note: The person/entity responsible for submitting your Dial Before You Dig (DBYD) inquiry should take care to ensure all plans listed above are received. Please contact 03 9173 6680 if you are missing any documentation.

Any information we provide is valid for 28 days from the date of issue. If the work extends beyond this period, or if the designs are altered in any way, you must re-submit your proposal to United Energy for re-assessment.

Dial Before You Dig enquiry, please contact 03 9173 6680

Reporting faults and asset damage contact 132 099

Note:

1. The underground cables referred to in this advice are defined as underground cables owned or controlled by United Energy. Other utilities may have electrical assets in the vicinity of your work about which we have no information. Please also note that United Energy do not hold any plans of privately owned cables on private property.
2. Due to the age of some cables and records, it is impossible for us to conclusively ascertain the location of all cables at or around the location described in your DBYD inquiry. Accordingly, United Energy is unable to warrant or otherwise guarantee the accuracy or completeness of any information it provides, and such information should not be relied upon when undertaking or proposing to undertake underground works.
3. Due to the inherent dangers associated with excavating in the vicinity of underground cables, you must ensure all reasonable precautions are taken prior to and when undertaking any such works, including the following:
    - All excavation sites should be examined visually for underground cables by careful hand excavation;
    - Cable cover slabs, if present may only be removed and replaced under the approval and supervision of an authorised United Energy representative;
    - Pay particular attention to areas surrounding Pole Type Substations, High Voltage Switches and Kiosk Substations as there are often unrecorded earth wires buried in their vicinity;
    - If any undisclosed underground cables are located, United Energy must be notified immediately;
    - All personnel involved or proposed to be involved in the underground works must be properly briefed, trained, experienced and qualified, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment;
    - All excavation must be undertaken in accordance with the Electrical Safety (General) Regulations (2019).
4. To the extent applicable at law, United Energy Distribution Pty Ltd and each of their directors, employees, officers and authorised contractors will have no liability whatsoever to any person for any claim, loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract, tort (including negligence) and/or breach of statute) which may be suffered or incurred from or in connection with any information provided or not provided to you in response to your DBYD inquiry.
5. Except as expressly provided to the contrary in this information sheet (including any attached plans), all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

United Energy engages Zinfra as its authorised contractor to carry out operational and maintenance activities on United Energy's behalf.

OVERHEAD AND UNDERGROUND NO GO ZONES

Are any **overhead** or **underground** power lines/cables located near your proposed work and will your equipment intrude into a NO GO ZONE? If the answer is YES to any of these questions or you are NOT SURE, please phone the following number to discuss your NO GO ZONE inquiry. Before work commences, you must follow the NO GO ZONE safety procedures.

Visit the United Energy website > Safety > No Go Zone (https://www.unitedenergy.com.au/safety/no-go-zones/).

For more information on NO GO ZONE areas contact:

- Energy Safe Victoria www.esv.vic.gov.au
- WORKSAFE Victoria www.worksafe.vic.gov.au

If your query is in reference to a NO GO ZONE and United Energy Assets, phone 132 099

Caution: Underground Earthing Conductors

- Underground earthing conductors are installed in the vicinity of Pole Type Substations, High Voltage Switches and Kiosk Substations. These installations consist of lengths of stranded copper conductor, either insulated or bare, connected to earth rods, all of which are buried approximately 500mm below ground level and are connected to our pole or to our substation. These lengths of conductor are usually installed directly in line with our overhead conductors but may be installed in other directions out from our pole because of the need to avoid obstacles. They may also be installed in the cable trench leading from our substation.
- **Important Notice:** It is critical that the integrity of these earthing installations be maintained to ensure the safety of all personnel who may be involved in work on or who may be in the vicinity of these poles at any time. Please attempt to prove the location of our earthing installation by excavating using hand tools. If during your works, United Energy assets are damaged, please contact 132099 and advise of the location (address of property adjacent to work site or the pole identity number attached to the pole) and the extent of the damage.

Protective Covers

As a guide, electrical cables usually have protective covers of:

- Concrete or PVC cover slabs;
- PVC, A.C. or galvanised iron pipe;
- Concrete encased PVC pipe;
- Thin plastic marker tape; and/or
- Wooden troughing.

Note: Some cables are known to be buried without protection

To assist in the identification of an underground cable, some installations have marker tape installed above the cover slab or conduit protecting the cable. You must not rely on marker tape for the existence of underground cables. Protective covers, if present may only be removed and replaced under the approval and supervision of an authorised United Energy representative.

Excavating parallel to cable/s

It is essential that you establish the location of cable/s by careful hand excavation before machinery is within 300mm either side of the cable/s. These hand dug excavations should be dug at regular intervals to prove the actual location of the cable/s. Where the excavation depth is to exceed the cable depth and the protective covers or bedding around the cable/s could be disturbed, United Energy must be contacted.

Excavating across to cable/s

It is essential that you establish the location of cable/s by careful hand excavation before machinery is within 300mm either side of the cable/s. A minimum clearance of 150mm must be maintained above and below the cable/s.

If the width or depth of the excavation is such that the cable/s may be exposed, United Energy must be contacted to determine if the cable/s should be protected, supported, or taken out of service.

Boring

Where boring across the line of the cable/s is required, it is essential that you establish the location of cable/s by careful hand excavation. You must ensure a trench is dug one metre on the side of the cable/s of the approaching auger to ensure a minimum clearance of 150mm can be maintained.

Explosives

You must ensure that no explosives are used within 3 metres of a cable.

Alteration of Levels

If it is desired to increase or decrease ground levels above our cables, please contact United Energy before the project commences to seek our approval.

United Energy engages Zinfra as its authorised contractor to carry out operational and maintenance activities on United Energy's behalf.

Reference Plans

Response Plan

- 241651768 - United Energy Response Plan.pdf

Coversheets

Drawings

- BS-7025.pdf
- T1-195-403.pdf
- UE15-BUR-211874-3.pdf
- UE5-06-7774.TIF
- UE5-19-174464.pdf
- UE5-2006505.pdf
- UE5-70-198.TIF
- UE5-70-5065.TIF
- UE5-BUR-211874-3.pdf

United Energy engages Zinfra as its authorised contractor to carry out operational and maintenance activities on United Energy's behalf.

WARNING

Copyright of United Energy Distribution Pty Ltd ("United Energy"). All rights reserved.

No part of this plan may be reproduced in any form without written permission from United Energy.

Please be advised this is an extract of United Energy Distribution assets.

This is a representative only and may not indicated all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation.

Please read all conditions & information on the attached information sheet.

This extract is subject to those conditions.

NOTE: The information contained on this plan is only valid for 28 days from the date of issue.

Scale: 1:1000

This plan must be printed in colour in order to protect the integrity of the information.

Please note that the information contained in United Energy's GIS system is constantly being updated, and the information contained in these plans is subject to change.
To the best of our knowledge this information is accurate at the date of issue, United Energy does not accept liability for any loss suffered as a result of reliance on the information.
If you have any queries, please contact the Service Provider listed on the attached coversheet.

ISSUE DATE: 09 Jul 2024

DBYD Sequence Number: 241651768

Legend

- DBYD Work Area
- Asset Search Area
- Zone Substation
- High Voltage Cable
- Low Voltage Cable
- Communication Cable
- Earth Cable
- SWER Substation
- Distribution Substation
- Pole

UNITED ENERGY LTD
ACN 064 651 029

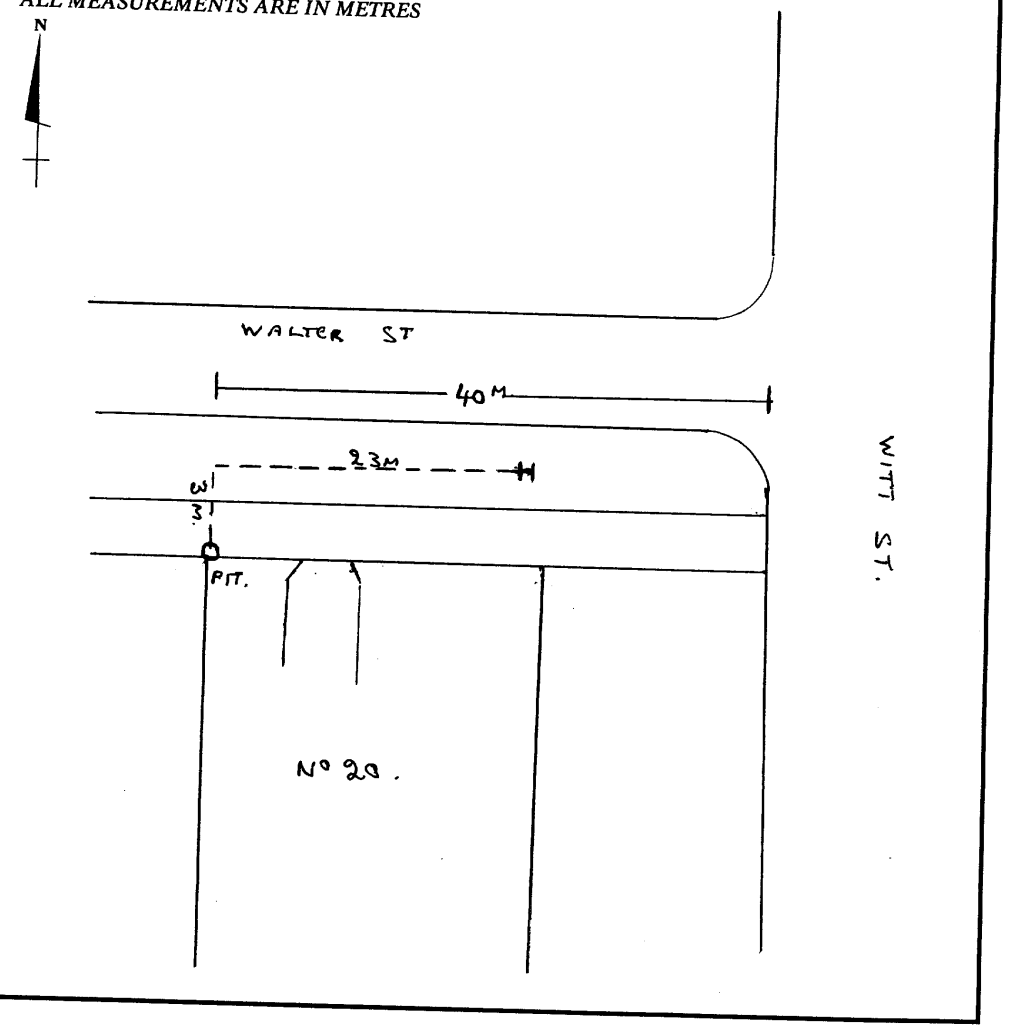
UNITEDenergy

Route plan underground service cable

Address R/o 20 WALTER ST
MITCHAM.

Cable Size 2C 16MM U/G SERVICE CABLE Reference
LENGTH.

ALL MEASUREMENTS ARE IN METRES



Contact Officer C SHARKEY.
Office BURWOOD
Telephone 9286 4856
Date 26/8/96

Map Reference MEL 49 B 9
Key/Base Yarra 18·11
F.B./Drg. UE5/70/198

7530 262 2774
F/ESI52774A

CONDUITS:

1. CONDUITS SHALL BE HEAVY DUTY RIGID SOLID PVC TO AS 2053 (TO THE MINIMUM 1984 STANDARDS) COLOURED ORANGE. (SANDWICH CONSTRUCTION OR CORRUGATED TYPES ARE NOT ACCEPTABLE)
2. PVC CONDUITS MUST BE JOINED WITH PVC SOLVENT CEMENT.
3. CONDUITS SHALL BE PROVIDED WITH SUITABLE END CAPS OR PLUGS OF NON-PERISHABLE MATERIAL AND A 4mm POLYETHYLENE-PLEATED DRAW ROPE.
4. WHERE VARIOUS SIZED CONDUITS ARE LAID IN A COMMON TRENCH, THEY SHALL ALL BE LAID WITH THE MINIMUM COVER OF THE LARGEST CONDUIT UNLESS OTHERWISE INDICATED ON THE CABLE CONSTRUCTION PLAN.

4A. WHERE VARIOUS SIZED CONDUITS ARE LAID IN A COMMON TRENCH, THEY SHALL ALL BE LAID WITH THE MINIMUM COVER TO THE FINAL SURFACE LEVEL OF THE LARGEST CONDUIT UNLESS OTHERWISE INDICATED ON THE CABLE CONSTRUCTION PLAN.

5. ANY 125mm OR 150mm CONDUITS MUST HAVE A MINIMUM SEPARATION BETWEEN OUTER WALLS OF 75mm FROM ANY OTHER CONDUIT, UNLESS OTHERWISE INDICATED ON THE FINAL CABLE CONSTRUCTION PLANS.
6. CONDUITS TO BE SLABBED WHERE THEY CROSS OTHER AUTHORITIES EASEMENTS. SLABBING IS TO EXTEND 0.5m BEYOND THE EASEMENT. UNITED ENERGY TO SUPPLY SLABS.
7. CONDUITS ARE TO BE INSTALLED UNDER ANY PROPOSED PAVED SURFACE.
8. CUSTOMER SHALL PROVIDE ALL CONDUITS, BEDDING SAND, ARRANGE ALL EXCAVATION AND REINSTATEMENT AND DISTRIBUTE SLABS ALONG CABLE ROUTE ON PRIVATE PROPERTY.
9. ORANGE MARKER TAPE IN ACCORDANCE WITH AS / NZS 2648'1 INSTALLED TO 300mm BELOW SURFACE LEVEL + OR - 50MM OF ALL CONDUITS OR CABLES.

9A. IF AN ORANGE COLOURED PE CONDUIT IS REQUIRED AS PART OF BORING WORKS AND IT DOES NOT MEET AS/NZ 2053. THEN IT WILL NEED TO BE INSTALLED AT A MINIMUM DEPTH OF 750mm COVER FROM GROUND LEVEL WITHOUT MECHANICAL PROTECTION (Jemena Cover Slabs). WHERE 750mm COVER CANNOT BE ACHIEVED A MINIMUM DEPTH OF 600mm COVER IS PERMITTED WITH APPROVED MECHANICAL PROTECTION OVER THE CONDUIT. PLEASE REFER TO NETWORK ASSET REGULATIONS.

GENERAL:

10. AT SUBSTATION, EARTHWIRES ARE BURIED WITHIN SUBSTATION SITE AND IN THE VICINITY OF THE SUBSTATION ALONG THE CABLE ROUTE.

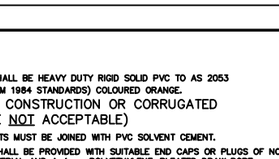
10A. CABLES AND CONDUITS MUST BE LAID TO THE MINIMUM REGULATED DEPTHS OF THE FINAL SURFACE LEVEL.

INSPECTIONS:

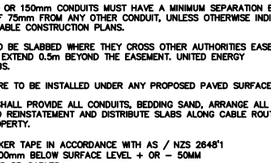
11. ALL CONDUITS AND SERVICE PILLARS SHALL BE INSTALLED TO THE SATISFACTION OF THE RESPONSIBLE OFFICER OF UNITED ENERGY AND APPROVED BEFORE BACKFILLING.
12. IF DURING CABLING, ANY CONDUIT THAT IS WRONGLY POSITIONED OR PREVENTS FREE PASSAGE OF CABLES THROUGH THEM SHALL BE MADE GOOD TO THE SATISFACTION OF THE RESPONSIBLE OFFICER OF UNITED ENERGY, NOT WITHSTANDING THAT THE WORK WAS PREVIOUSLY CONSIDERED SATISFACTORY.
13. CONTACT UNDERGROUND CABLE DETAILER (TELEPHONE 9238 3804) PRIOR TO INSTALLING CONDUITS AND TO CO-ORDINATE CABLING WITH TRENCHING WORKS.
14. ANY METALIC PIPES BURIED DIRECTLY IN THE GROUND WITHIN 2.0m OF THE SUBSTATION SITE SHALL BE ENCLOSED IN D.E.W. PIPE OR HD PVC CONDUIT OR 0.8mm OF PVC TAPE, TO ACHIEVE 1.0kV MINIMUM INSULATION LEVEL.

LABELS

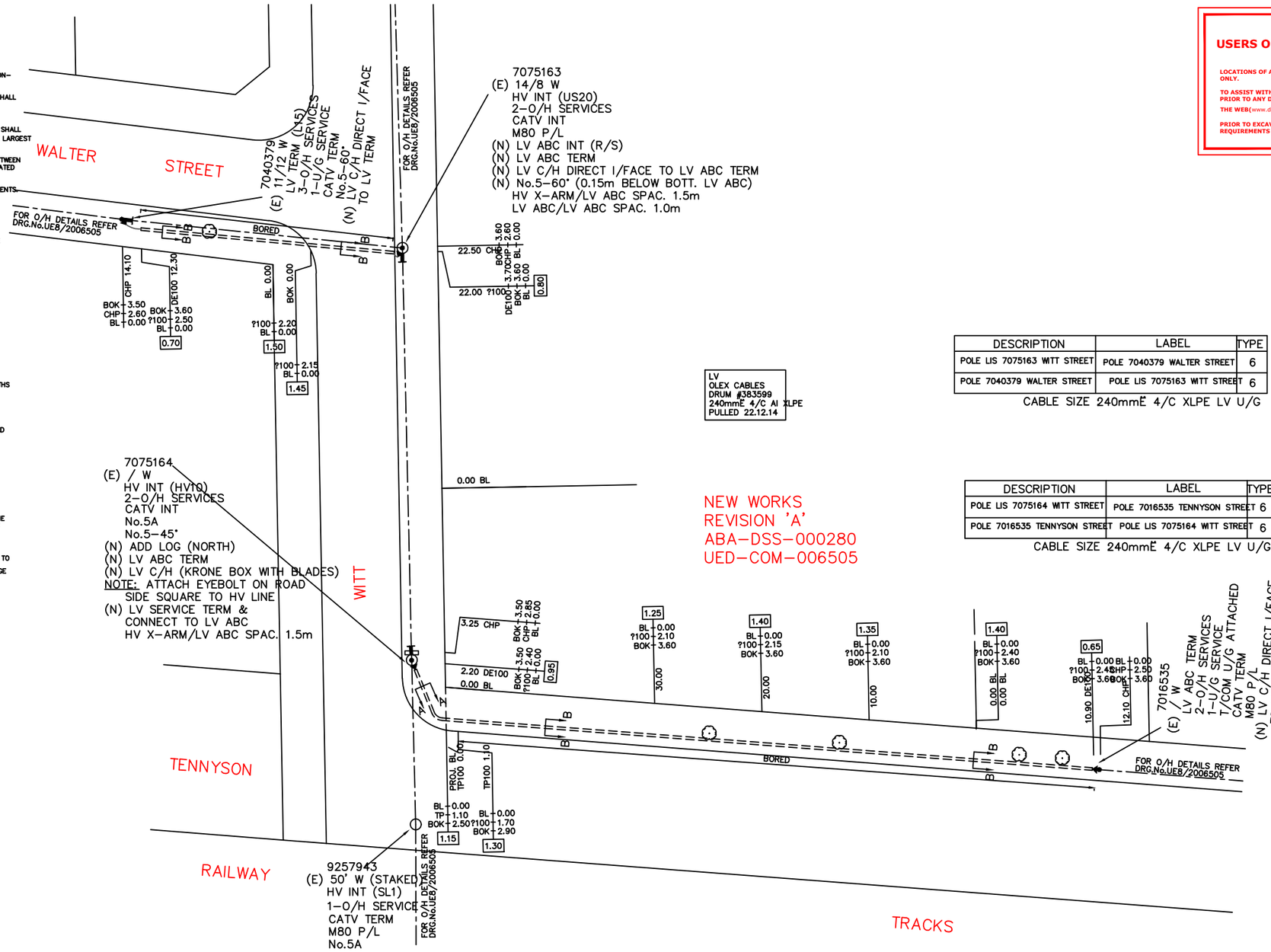
15. IF AN UNDERGROUND CABLE IS BURIED IN ANY PART OF A ROAD RESERVE RESERVE THEN A WARNING SIGN REGARDING UNDERGROUND POWER CABLES IS TO BE ATTACHED TO A POLE SUCH THAT THE SIGN IS VISIBLE FROM THE DIRECTION OF THE UNDERGROUND CABLE APPROACHING THE POLE. BOTTOM EDGE OF SIGN TO BE 1500mm ABOVE GROUND. POLE TO HAVE ONE SIGN ONLY.



SECTION A–A



SECTION B–B



DESCRIPTION	LABEL	TYPE
POLE LIS 7075163 WITT STREET	POLE 7040379 WALTER STREET	6
POLE 7040379 WALTER STREET	POLE LIS 7075163 WITT STREET	6

CABLE SIZE 240mm² 4/C XLPE LV U/G

DESCRIPTION	LABEL	TYPE
POLE LIS 7075164 WITT STREET	POLE 7016535 TENNYSON STREET	6
POLE 7016535 TENNYSON STREET	POLE LIS 7075164 WITT STREET	6

CABLE SIZE 240mm² 4/C XLPE LV U/G

NEW WORKS
REVISION 'A'
ABA-DSS-000280
UED-COM-006505

NOTE :
WATER SUPPLY MAIN IN TENNYSON STREET

IMPORTANT
USERS OF THIS PLAN PLEASE NOTE BEWARE

LOCATIONS OF ASSETS SHOWN ON THIS DRAWING ARE INDICATIVE ONLY.

TO ASSIST WITH THE LOCATION OF UNDERGROUND ASSET, PRIOR TO ANY DIGGING MAKE A DIAL BEFORE YOU DIG INQUIRY VIA THE WEB(www.dialbeforeyoudig.com.au) OR BY TELEPHONING **1100**.

PRIOR TO EXCAVATION PLEASE REFER TO THE ASSET OWNER'S REQUIREMENTS FOR DIGGING NEAR THEIR ASSETS.

LEGEND

- U.G. CABLE
- U.G. CONDUIT
- O/H CONDUCTOR
- CABLE HEAD POLE
- 1.25 DEPTH OF EARTH COVER TO TOP OF CABLE
- 0.75 DEPTH TO TOP OF OTHER SERVICES/OBSTRUCTIONS

4 2 0 4 8 12 16 20
SCALE OF METRES

REFERENCE DRAWINGS

REVISION

06.07.15	C	AS BUILT DETAILS ADDED	M.A.B.	06.07.15
TRIDEC 05.01.15	B	AS BUILT CABLE & CONDUIT DETAILS ADDED.	TRIDEC	05.01.15
USOL 22.10.14	A	TOTAL REDRAW OF EXISTING DRAWING NEW LV U/G CABLE BETWEEN POLE 7075163 & POLE 7040379 OF WALTER STREET & LV U/G CABLE EXTENDED TO POLE 7016535 IN TENNYSON STREET, ABA-DSS-000280 / UED-COM-006505	TRIDEC	22.10.14

CONTACT OFFICER	Mark Berengto PH:8551 7251
ZNX WBS	ABA-DSS-000280
UED WBS	UED-COM-006505
MEL.REF.	
OPS. DIAG.	TRIDEC
SURVEY REF.	

ASSET MANAGER: ZNX — Produced by Zinfra Group Network Services

ASSET OWNER: UNITED ENERGY

DRAWN USOL 12/6/2014	DRG No.UE5/2006505 C
DESIGN CHECKED I. Perera 18/06/2014	CONSTRUCTION PLAN – U.G. CABLES
APPROVED 24/06/2014 G. Ferguson	TLM "WITT WALTER" SUBSTATION
	WITT STREET
	MITCHAM
	22kV

MF DISTBN 53 13287

STATE ELECTRICITY COMMISSION OF VICTORIA
TRANSMISSION DEVELOPMENT DEPARTMENT

HEATHERDALE RD.
FOR CONTINUATION SEE DRG. OM63/195/186
FOSTER ST.
MOLAN ST.
SHOPS
SHOP
GARAGE
DUNLOP TYRE SERVICE
BOX HILL C.C. SUB.
LONGLAND RD.
BUXTON RD.
MITCHAM SCHOOL FOR HANDICAPPED CHILDREN
WITT ST.
LOADING COIL JOINT
MAROONDAH HIGHWAY
VICTORIA ST.
SEE 'DETAIL' BELOW
MONOMEETH DVE (EAST)
MONOMEETH DRIVE (WEST)
COCHRANE ST.
FOR CONTINUATION SEE DRG. OM63/195/624
UNDEFINED BUILDING LINE
REPEATER JOINT
REPEATER PIT
'DETAIL'
TUCKER INDUSTRIES
LEE PDE.
FOR CONTINUATION SEE DRG. OM63/195/404
RWTLP 131A 30
RWTLP 131A 3
RWTLP 131A 9A
RWTLP 131A 5
RWTLP 131A 5C
RWTLP 131A 30
RWTLP 131A 6
RWTLP 131A 5A
RWTLP 131A 5B
RWTLP 131A 4
RWTLP 131A 6
RWTLP 131A 5A
RWTLP 131A 33
RWTLP 131A
LOADING COIL JOINT
PZ97
40' 0 40' 80' 120' 160' 200'

9-9-73	C	REVISED DETAILS OF FOOTPATH & KERB IN MAROONDAH HWY. EAST OF HEATHERDALE RD.	E.P.T.					
23-10-72	B	CORRECTED DIMENSIONING NEAR MONOMEETH DRIVE	A.J.C.					
17-3-72	A	ADDED JOINTS 5A & 5B, SPARE PIPE ACROSS VICTORIA ST. GENERAL REVISION.	E.P.T.					
16-3-71	C	REVISED COVER & SUPERVISORY CABLE RWTLP 131 IN MAROONDAH HIGHWAY.	G.P.					
28-7-71	B	ADDED MONOMEETH DRIVE (EAST) RELOCATED MONOMEETH DVE (EAST) TRENCH AND 4 PULLS IN MAROONDAH HWY. ADDED JOINTS 5C & 5D.	E.P.T.		6-8-71	J	ADDED RECREATION FOOTPATH & KERB IN MAROONDAH HWY. WEST OF VICTORIA STREET	R.G.H.
DATE		REMARKS	CHECKED	PASSED	15-11-73	H	REVISED CABLE & KERB BETWEEN HEATHERDALE & BUXTON RDS. ADDED TRAFFIC ISLANDS MAROONDAH HWY.	A.J.C.

DRAWING SCHEDULE

TITLE	DRAWING No.
	OM 36/195

ROUTE OF UNDERGROUND CABLES
IN HEATHERDALE RD. & MAROONDAH HWY. MITCHAM.

SECTION No. OM 17
DRAWN P.J. 10-4-'68
TRACED
CHECKED G.P. 23-4-69
CHIEF DRAFTSMAN E.L. Burt 6-5-69.

DRG. No. OM63/195/403 J

DESIGN ENGINEER
RECOMMENDED H.R. Mutsaers
APPROVED J. Johnson
ELECTRICAL ENGINEER

OM63/195/403

9 OCT 1973 | 8 MAY 1972 / 3.2- 3M | 17 MAY 1971 22 JUL 1969 | B

A3 A2

CONTINUED ON DRG No. 211874-2

CONTINUED ON DRG No. 211874-4

(E) POLE 7075863
(E) HV GAS SWITCH (BH 15211)
(B) REPLACE STAY
(N) HV & LV TERM
HV: CH TO UET1/101/30/1
LV: CH
4-400a FSD (BLADES)
No.5845° STAY
(N) FOLCB (1m, 15a)

ANTONIO PARK

DEEP CREEK RD.

WARNES RD.

WITT ST.

BUXTON RD.

HOUSE

UNIT 1 UNIT 2 UNIT 3

RETAIN (E) POLE, BRACKET AND LANTERNS

RETAIN (E) PEDESTALS

(E)PEDESTAL

RETAIN (E) JUPS BKT AND LANTERNS

TRAFFIC CONTROL BOX

CONNECT (E) P/L CABLE EAST CCT IN (N) PIT ONTO (N) CABLE

DISCONNECT (E) P/L CABLE WEST CCT OF (N) PIT

CUST. PILLAR

(N)EXPOSE (E) 24.6mm² L/C XLPE LV U/G CABLE & PARK (N)SERVICE TEE JOINT

(N)SERVICE PIT

SEE DETAIL 'A'

(E) POLE 7033722
No.3845°
(B) RETIRE HV FUSES
(N) HV & LV TERM
HV: CH TO UET1/101/10/1
LV: CH
2 x 400a FSD's (BLADES)

(E) U/G CUST CABLE CUSTOMER IN (N) PIT

(E) POLE 7014102
No.5860° STAY

(E) / W
HV TERM (SL22)
HV C/H
LV ABC TERM
2x LV C/H
1x FSD (N.O.)
1-O/H SERVICE
CATV TERM & U/G
M80 P/L
No.5-60° (HV)

7003654
(E) / W
LV TERM (L15)
2x LV C/H VIA
2x LV FSD (N.C.)
3-O/H SERVICES
1-U/G SERVICE
CATV TERM & U/G
M80 P/L (X-ARM)
No.5-45°
REMOVE LV C/H BRIDGES & FSD OF WHITEHORSE RD WEST U/G CABLE
BRIDGE WHITEHORSE RD WEST LV U/G CABLE TO LV O/H VIA EAST LV U/G CABLE FSD (N.O.)
(SEE BEFORE & AFTER LV DIAGRAMS)

SERVICED FROM WITT ST.

SERVICED FROM BUXTON RD.

HEATHERWOOD SCHOOL SERVICED FROM WITT ST.

HV CABINET 720 "WHORSE"

HV CABINET 722 "WHORSE"

CL (US)T PILLAR

NEW WORKS
REVISION 'F'
ABA-CHL-001604
UED-CSA-001604

H.V. CABLES

THE FOLLOWING DRUM NO:s REFER TO THE H.V. CABLES INSTALLED IN SEQUENCE FROM HEATHERDALE RD TO CABLE HEAD POLE OPPOSITE HUMPHREYS AVE.

433217/1 M.M CABLES
433218/1 M.M. CABLES
433244/1 PIRELLI CABLES
433246/1 PIRELLI CABLES
433248/1 PIRELLI CABLES
433243/1 PIRELLI CABLES
24229/1 M.M CABLES
433245/1 PIRELLI CABLES
1466117/1 M.M. CABLES

FOR FURTHER DETAILS, REFER TO TEST CERTIFICATES IN UNITED ENEGY CONSTRUCTION FILES.

Ue CABLES	FROM	TO	SUGGESTED OFFSETS FROM B/L			
			NORTH SIDE OFFSET (m)	SOUTH SIDE OFFSET (m)	EAST SIDE OFFSET (m)	WEST SIDE OFFSET (m)
Whitehorse Rd	Deep Creek Rd	Warnes Rd	AS SHOWN			
Whitehorse Rd	Warnes Rd	Dampier Gve	AS SHOWN			
Whitehorse Rd	Victory St	Witt St		AS SHOWN		
Whitehorse Rd	Witt St	Buxton Rd		AS SHOWN		
Whitehorse Rd	Buxton Rd	Longland Rd		AS SHOWN		
Deep Creek Rd						3.0
Witt St					2.3	
Buxton Rd						2.3
Warnes Rd					2.3	

LOCATION OF ALL PRIVATE & OTHER AUTHORITIES ASSETS PRIOR TO EXCAVATION AND CONFIRMING SUITABILITY OF SUGGESTED OFFSETS, IS THE CONTRACTORS RESPONSIBILITY.

IMPORTANT
USERS OF THIS PLAN PLEASE NOTE
BEWARE

LOCATIONS OF ASSETS SHOWN ON THIS DRAWING ARE INDICATIVE ONLY.

TO ASSEST WITH THE LOCATION OF UNDERGROUND ASSET, PRIOR TO ANY DIGGING MAKE A DIAL BEFORE YOU DIG INQUIRY VIA THE WEB(www.dialbeforeyoudig.com.au) OR BY TELEPHONING 1100.

PRIOR TO EXCAVATION PLEASE REFER TO THE ASSET OWNER'S REQUIREMENTS FOR DIGGING NEAR THEIR ASSETS.

LV - YARD STOCK
16mm² 4/C XLPE
PULLED 27/03/19
DETAILED BY:
M. ROBINSON

DETAIL 'A'

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

LENGTHS ARE IN METRES
ORIGINAL SCALE 1: 500

LEGEND

- 185mm²3/c XLPE 22kV UNDERGROUND CABLE (UNLESS OTHERWISE SHOWN)
- 185mm²4/c XLPE LV UNDERGROUND CABLE (UNLESS OTHERWISE SHOWN)
- 16mm²4/c XLPE LV UNDERGROUND SERVICE CABLE (UNLESS OTHERWISE SHOWN)
- 4mm² OR 16mm² PUBLIC LIGHTING CABLE
- SUPERVISORY CABLE
- STLV = LV MAINS STRAIGHT JOINT, STHV= HIGH VOLTAGE STRAIGHT JOINT
- TJLV = LV MAINS TEE JOINT, TJHV= HIGH VOLTAGE TEE JOINT
- LV SERVICE TEE JOINT
- HIGH VOLTAGE TRANSITION JOINT
- INSULATED END
- SEALED END
- U/G CABLE CUT END
- MULTIPLE CONDUITS (REFER CROSS-SECTIONS FOR DETAILS)
- CABLE CONDUIT (63mm OUTSIDE Dia. UNLESS OTHERWISE SHOWN)
- CABLE HEAD POLE:- ▷ HV CABLE TERMINATION; ▶ LV CABLE TERMINATION (185mm² OR LARGER); ○ LV CABLE TERMINATION (LESS THAN 185mm²)
- SERVICE PIT
- FOLCB LV UNDERGROUND CABLE POINT OF ATTACHMENT (FUSED OVERHEAD LINE CONNECTION BOX)
- SP LV SERVICE PILLAR
- V VICROADS TRAFFIC CONTROL BOX
- LV DISTRIBUTION CABINET
- HV DISTRIBUTION CABINET (4 SWITCH)
- HV DISTRIBUTION CABINET (3 SWITCH)
- HV CONNECTION CABINET (AUSTRALMOLD OR APPROVED UEL EQUIVALENT)
- PARALLELING PILLAR
- 44 / 14.5 HOUSE No / LOT No
- SUBTRANSMISSION POLE
- HV/LV POLE
- HV POLE
- LV POLE
- SINGLE POLE SUBSTATION
- STAY
- SWITCH POLE
- 3 12/8 POLE No. LENGTH(m)/STRENGTH(kN)
- TERM TERMINATION
- ST STRAIN
- No5-45 STAY SIZE, ANGLE
- T/O TEE - OFF
- X REMOVE EXISTING POLE
- S/P SERVICE POLE
- I.S.H. IN SAME HOLE
- O/H CONDUCTOR
- BKT BRACKET
- DBL DOUBLE
- STL STEEL POLE
- 150W HPSV LANTERN (EXISTING & PROPOSED) MINIMUM MOUNTING HEIGHT 10.0m GEC BOSTON 3 L176 TO V.E.S.I. SPECIFICATIONS COMPLETE WITH TWIN-ARC LAMP & INTEGRAL P.E. CELL
- 250W HPSV LANTERN (EXISTING & PROPOSED) MINIMUM MOUNTING HEIGHT 12.5m GEC BOSTON 3 L180 TO V.E.S.I. SPECIFICATIONS COMPLETE WITH TWIN-ARC LAMP & INTEGRAL P.E. CELL
- 11.0m JOINT USE POLE WITH { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET
- 11.0m JOINT USE MAST ARM POLE WITH { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET
- 11.0m IMPACT ABSORBING POLE WITH POLES INSTALLED MINIMUM 1.0m BOK { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET
- 11.0m SLIPBASE POLE WITH POLES INSTALLED MINIMUM 1.0m BOK { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET

(E) EXISTING
(N) NEW
FUT FUTURE
BL BUILDING LINE
BOK BACK OF KERB
FSD FUSED SWITCH DISCONNECTOR (KRONE OR UEL APPROVED) EQUIVALENT
FOLCB FUSED OVERHEAD LINE CONNECTOR BOX
CH CABLE HEAD
EOT EDGE OF TRENCH

REVISION					
TRIDEC 01.04.19	G	AS BUILT CABLE & CONDUIT DETAILS ADDED FOR REV 'F'	TRIDEC	03.04.19
USQL 21.2.19	F	NEW SUPPLY PIT No.708-710 WHITEHORSE ROAD ADDED; ABA-CHL-001604 / UED-CSA-001604	M.Bernard 22.02.19	L.Masters 22.02.19
24.06.14	E	LV U/G & O/H BRIDGING ON POLES LIS 7014695 & LIS 7003654 UPDATED: ABA-DSS-000280/UED-COM-006505	T.P. 24.06.14	G.F. 24.06.14
27.9.04	D	CABLE DETAILS ADDED FOR (N) CUST. PILLAR NEAR WITT ST	TRIDEC	27.9.04
LH 26.10.99	C	FINAL CABLE DETAILS ADDED	LH	26.10.99
JACADD 12/5/99	B	LIGHTING LEGEND MODIFICATION	LL 3/6/99	S.K. 3/6/99

REFERENCE DRAWINGS

REFERENCES
CONTACT OFFICER: S. CAPSALIS PH:-
CPMS No. -
COSMOS No. -
MELWAY REF. -
AMG REF. -
OPERATION DIAG
FILE PATH
F.B. XXXX
SURVEY FILE : XXXXXXXX

United Energy
ACN 064 651 029

Produced by :
ZNX
Network Services

DRG No. UE5/BUR/211874/3 G
SHEET 3 OF 8

PLAN - U.G. CABLES
WHITEHORSE ROAD UNDERGROUNDING OF ASSETS
STAGE 5
CITY OF WHITEHORSE

DRAWN J.CASSIDY 1/4/99
CHECKED 6/12/'98
APPROVED 6/12/'98
ORIG. SCALE 1:500

(CABLE PLAN No.)

DV - AutoCAD B1

679 X 960mm

B1

Route Plan
Unknown Location Of Underground Assets

UNITED ENERGY DISTRIBUTION

ABN 70 064 651 029

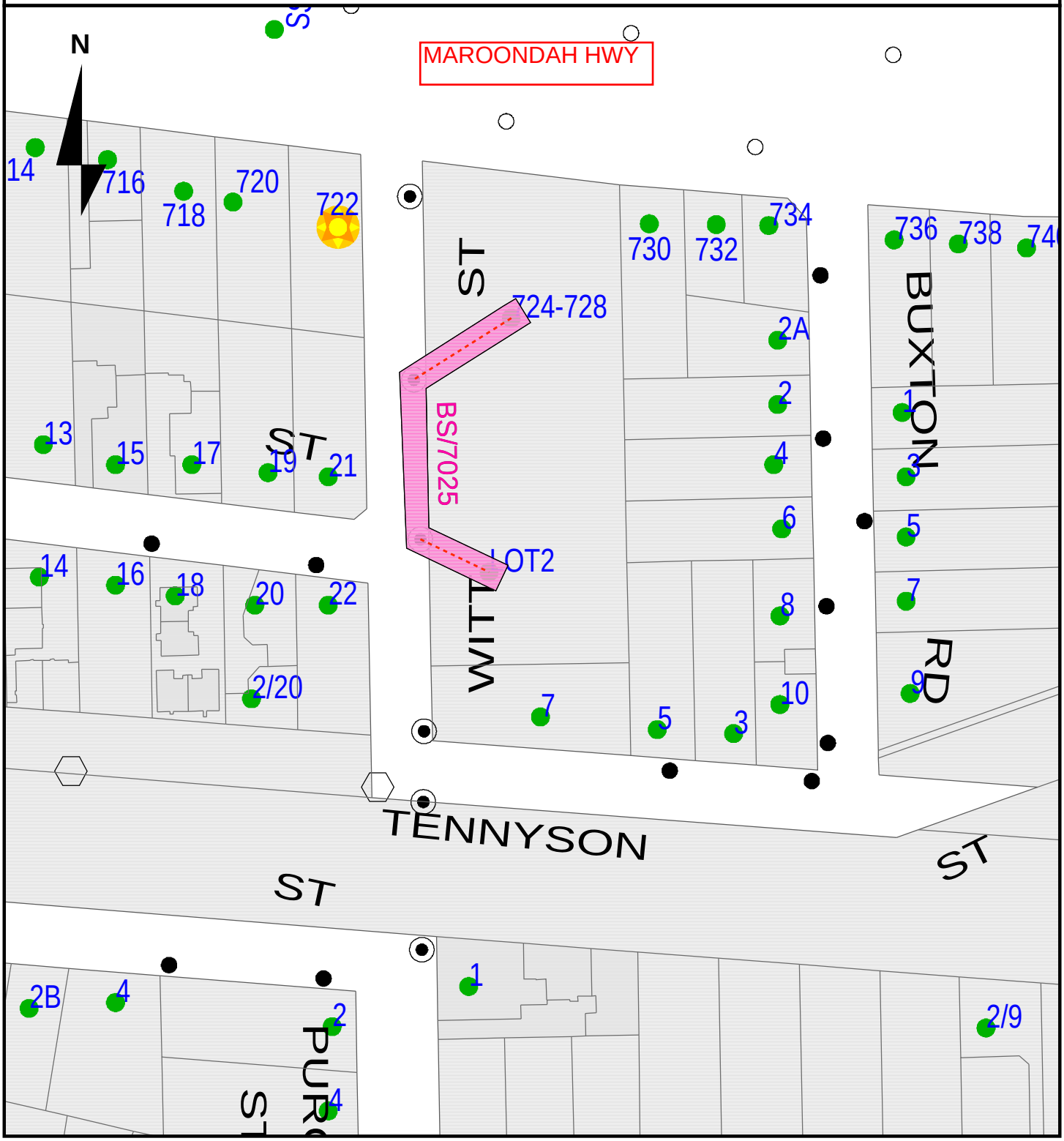
Address: WITT ST, MITCHAM

Melway Ref : 49 C9

Cable Size: UNKNOWN **Date Installed: UNKNOWN** **UE Drawing No: BS- 7025**

WARNING: UNKNOWN LOCATION OF CABLE/S

PRIOR TO ANY EXCAVATIONS WITHIN 100 METRES OF THE CABLE OR SHADED AREA, YOU ARE REQUIRED TO DISCUSS YOUR WORKS IN MORE DETAIL.
Please call the number on your Dial Before You Dig response sheet to discuss your proposed works.



UNITED ENERGY LTD
ACN 064 651 029

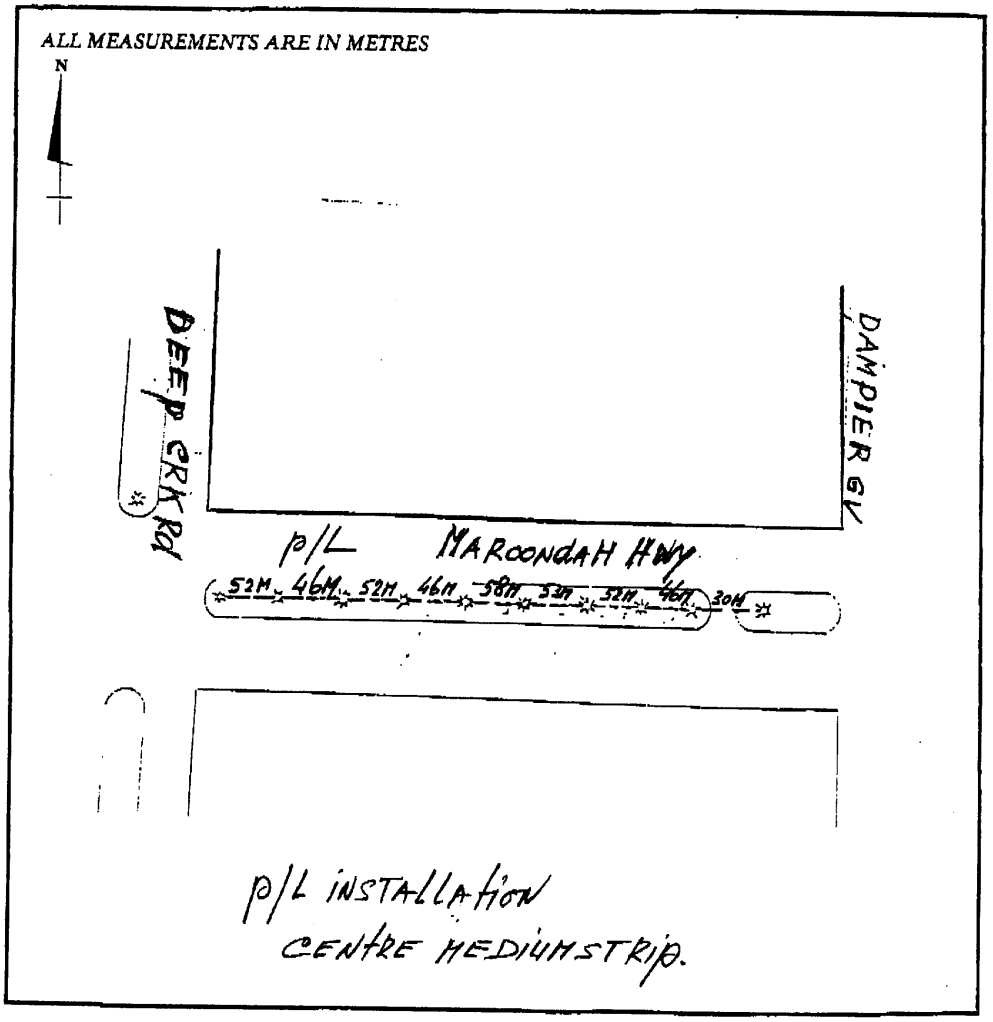
UNITEDenergy

Route plan underground service cable

Address MAROONDAH HWY MITCHAM
INTERSECTING STREETS: DEEP CRK Rd & DAMPIER GV.

Cable Size ..... Reference .....

ALL MEASUREMENTS ARE IN METRES



Contact Officer H. OLTHOF
Office NPS
Telephone .....
Date 05-06-97

Map Reference 49 D9
Key/Base YARRA 18.11
F.B./Drg. UE5 | 70 | 5065

SAQCDA-01

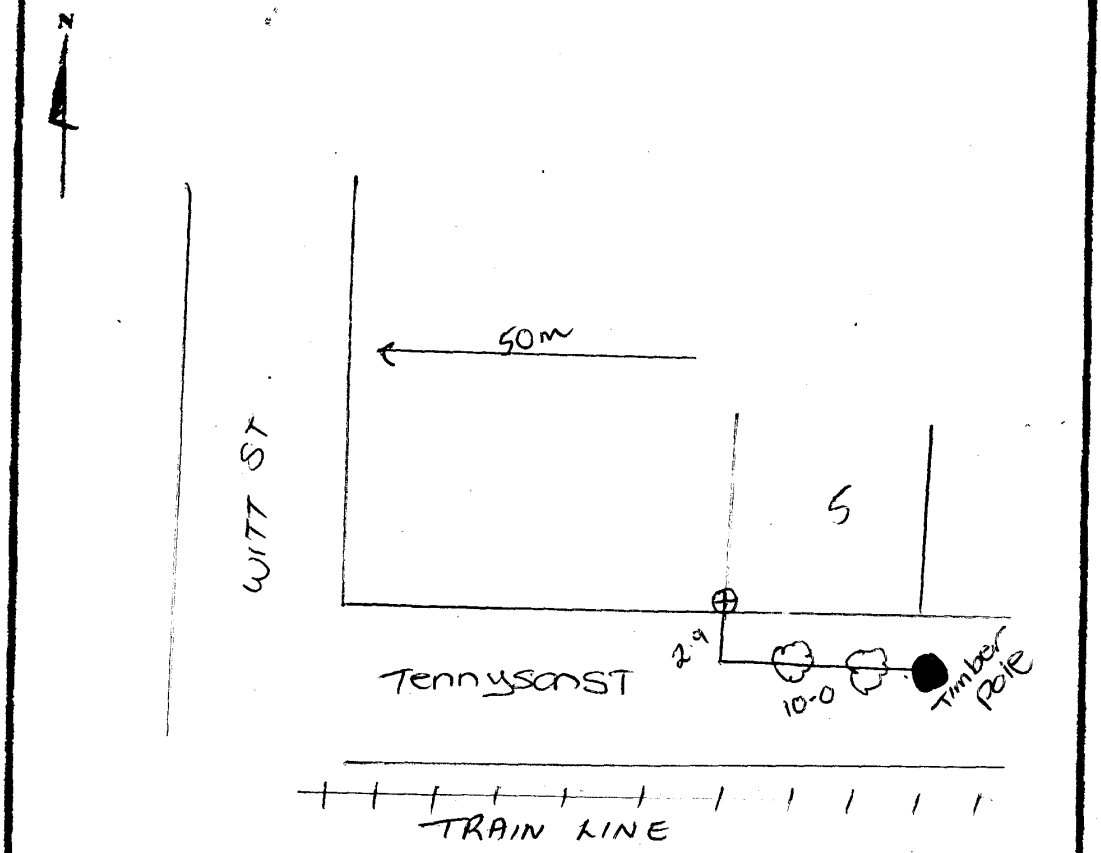
UNITED ENERGY LIMITED
ABN 70 064 651 029

Route Plan
Underground Service Cable

UNITED ENERGY

Address CNR TENNYSON ST & WITT ST
Mitcham
Service Order No: 1183087804
Cable Size 4 x 16mm XLPE
Contractor Reference CICIW 1105

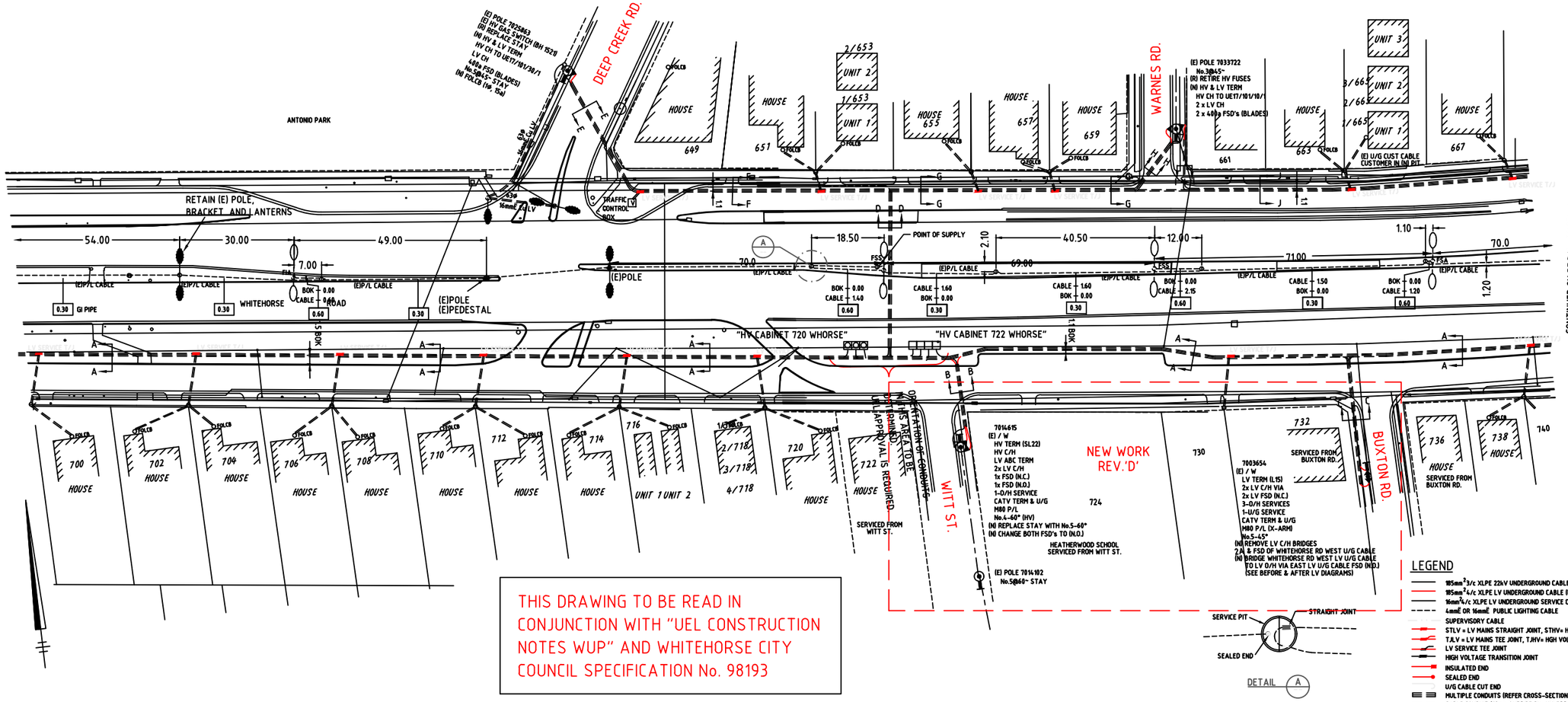
ALL MEASUREMENTS ARE IN METERS
Min cable depth is 600mm

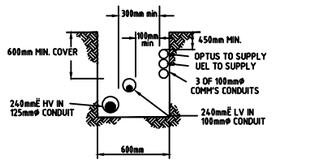


Contact Officer D JOHNSEN
Company UAM SCORESBY
Date Installed 17/2/03
Comp 17.2.03

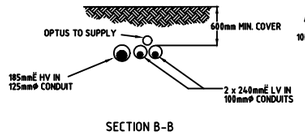
Melway's Reference 49 C9
AMG Grid
UE Drawing No: Yarra 18-11
06/7774

A3 A2

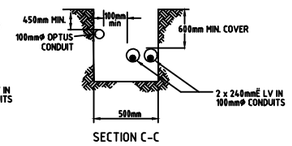




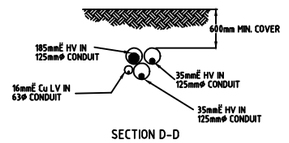
SECTION A-A



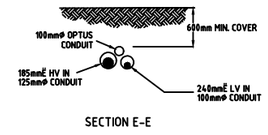
SECTION B-B



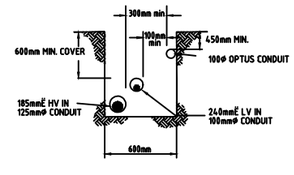
SECTION C-C



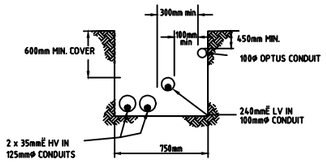
SECTION D-D



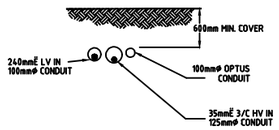
SECTION E-E



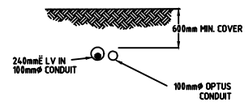
SECTION F-F



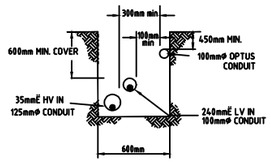
SECTION G-G



SECTION H-H



SECTION I-I



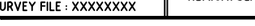
SECTION J-J

NOTES.

1. BENDING RADIUS OF CABLE TO BE TO CABLE MANUFACTURERS SPECIFICATIONS.
2. CABLE NOT IN CONDUIT TO BE SAND AND SLABBED TO UNITED ENERGY'S SPECIFICATIONS.
3. AS BUILT PLANS TO DETAIL LOCATIONS OF ALL CONDUIT ENDS, & DEPTHS OF ALL CABLES/CONDUITS.
4. ALL ROAD CROSSINGS TO BE BORED, UNLESS DEEMED INAPPROPRIATE.
5. BACK OF KERB (B.O.K.) DIMENSIONS ARE TO THE CENTRE LINE OF TRENCH.

Ue CABLES	FROM	TO	SUGGESTED OFFSETS FROM B/L			
			NORTH SIDE OFFSET (m)	SOUTH SIDE OFFSET (m)	EAST SIDE OFFSET (m)	WEST SIDE OFFSET (m)
Whitehorse Rd	Deep Creek Rd	Warnes Rd	AS SHOWN			
Whitehorse Rd	Warnes Rd	Dampier Gve	AS SHOWN			
Whitehorse Rd	Victory St	Witt St		AS SHOWN		
Whitehorse Rd	Witt St	Buxton Rd		AS SHOWN		
Whitehorse Rd	Buxton Rd	Longland Rd		AS SHOWN		
Deep Creek Rd						3.0
Witt St					2.3	
Buxton Rd						2.3
Warnes Rd					2.3	

LOCATION OF ALL PRIVATE & OTHER AUTHORITIES ASSETS PRIOR TO EXCAVATION AND CONFIRMING SUITABILITY OF SUGGESTED OFFSETS, IS THE CONTRACTORS RESPONSIBILITY.



LEGEND

- 185mm²3/c XLPE 22kV UNDERGROUND CABLE (UNLESS OTHERWISE SHOWN)
- 185mm²4/c XLPE LV UNDERGROUND CABLE (UNLESS OTHERWISE SHOWN)
- 16mm²4/c XLPE LV UNDERGROUND SERVICE CABLE (UNLESS OTHERWISE SHOWN)
- 4mmÊ OR 16mmÊ PUBLIC LIGHTING CABLE
- SUPERVISORY CABLE
- STLV = LV MAINS STRAIGHT JOINT, STHV= HIGH VOLTAGE STRAIGHT JOINT
- TJLV = LV MAINS TEE JOINT, TJHV= HGH VOLTAGE TEE JOINT
- LV SERVICE TEE JOINT
- HIGH VOLTAGE TRANSITION JOINT
- INSULATED END
- SEALED END
- U/G CABLE CUT END
- MULTIPLE CONDUITS (REFER CROSS-SECTIONS FOR DETAILS)
- CABLE CONDUIT (63mm OUTSIDE Dia. UNLESS OTHERWISE SHOWN)
- CABLE HEAD POLE:- ▷ HV CABLE TERMINATION; ▶ LV CABLE TERMINATION (185mmÊ OR LARGER); ○ LV CABLE TERMINATION (LESS THAN 185mmÊ)
- SERVICE PIT
- FOLCB LV UNDERGROUND CABLE POINT OF ATTACHMENT (FUSED OVERHEAD LINE CONNECTION BOX)
- SP LV SERVICE PILLAR
- V VICROADS TRAFFIC CONTROL BOX
- LV DISTRIBUTION CABINET
- HV DISTRIBUTION CABINET (4 SWITCH)
- HV DISTRIBUTION CABINET (3 SWITCH)
- HV CONNECTION CABINET (AUSTRALMOLD OR APPROVED UEL EQUIVALENT)
- PARALLELING PILLAR
- 44/145 HOUSE No / LOT No
- SUBTRANSMISSION POLE
- HV/LV POLE
- HV POLE
- LV POLE
- SINGLE POLE SUBSTATION
- STAY
- SWITCH POLE
- 3 12/8 POLE No. LENGTH(m)/STRENGTH(kN)
- TERM TERMINATION
- ST STRAIN
- No5-45 STAY SIZE, ANGLE
- T/O TEE - OFF
- X REMOVE EXISTING POLE
- S/P SERVICE POLE
- I.S.H. IN SAME HOLE
- O/H CONDUCTOR
- BKT BRACKET
- DBL DOUBLE
- STL STEEL POLE
- 150W HPSV LANTERN (EXISTING & PROPOSED) MINIMUM MOUNTING HEIGHT 10.0m GEC BOSTON 3 L176 TO V.E.S.I. SPECIFICATIONS COMPLETE WITH TWIN-ARC LAMP & INTEGRAL P.E. CELL
- 250W HPSV LANTERN (EXISTING & PROPOSED) MINIMUM MOUNTING HEIGHT 12.5m GEC BOSTON 3 L180 TO V.E.S.I. SPECIFICATIONS COMPLETE WITH TWIN-ARC LAMP & INTEGRAL P.E. CELL
- JTS 11.0m JOINT USE POLE WITH { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET }
- JTA
- JTS JT1A 11.0m JOINT USE MAST ARM POLE WITH { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET }
- IS IA 11.0m IMPACT ABSORBING POLE WITH POLES INSTALLED MINIMUM 1.0m BOK { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET }
- SS SA 11.0m SLIPBASE POLE WITH POLES INSTALLED MINIMUM 1.0m BOK { 3.0m/3.0m S=SYMMETRICAL BRACKET; 3.0m/4.5m A=ASYMMETRICAL BRACKET }

(N) NEW; (E) EXISTING; FUT FUTURE; BL BUILDING LINE; BOK BACK OF KERB; FSD FUSED SWITCH DISCONNECTOR (KRONE OR UEL APPROVED EQUIVALENT); FOLCB FUSED OVERHEAD LINE CONNECTOR BOX; CH CABLE HEAD

REFERENCE DRAWINGS

REVISION

24.06.14	D	LV U/G & O/H BRIDGING ON POLES LIS 7014615 & LIS 7003654 UPDATED: ABA-DSS-000280/UED-COM-006305	T.P. 24.06.14 / G.F. 24.06.14
E.E.D. 21/10/99	C	REVISED PUBLIC LIGHTINGS & SERVICE PITS TO SITE MARKUPS	
JACADD 12/5/99	B	LIGHTING LEGEND MODIFICATION	L. 3/6/99 / S.C. 3/6/99
JACADD 14/4/99	A	CABLE OFFSET WAS LOCATED IN NATURE STRIP ON SOUTHERN SIDE OF WHITEHORSE ROAD. CABLE OFFSET WAS 0.5m FROM BL ON NTH SIDE OF WHITEHORSE RD	L. 15/4/99 / S.C. 15/4/99

REFERENCES

CONTACT OFFICER	S. CAPSALIS PH:-
CPMS No.	-
COSMOS No.	-
MELWAY REF.	-
AMG REF.	-
OPERATION DIAG	
FILE PATH	

F.B. XXXX
SURVEY FILE : XXXXXXXX

United Energy
ACN 066 651 029

Produced by :
ZNX
Network Services

DRG No. UE15/BUR/211874/3 D — SHEET 3 OF 8

CONSTRUCTION PLAN - U.G. CABLES
WHITEHORSE ROAD UNDERGROUNDING OF ASSETS
STAGE 5
CITY OF WHITEHORSE

DRAWN	J. PASSIOU	1/4/99	
CHECKED		4/12/98	
APPROVED		4/12/98	
ORIG. SCALE	1:500		

(CABLE PLAN No.)

DV - AutoCAD B1

679 X 960mm

B1

UNITED ENERGY LTD
ABN 70 064 651 029

Route plan
underground service cable

Address	5 TENNYSON ST MITCHAM	**Service Order No**	100102174464
Cable size	4 x 16 mm² XLPE	**Reference**	ASA4144

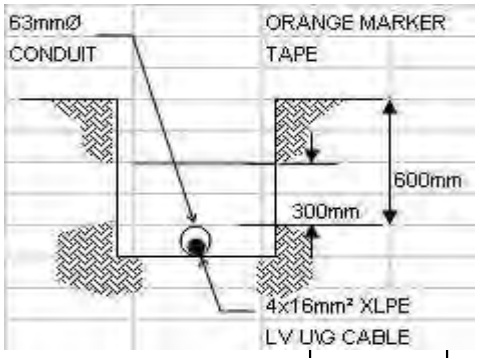
ALL MEASUREMENTS ARE IN METRES

NOT TO SCALE

PITS >THAN 300mm FROM BOUNDARY REQUIRE LEAD IN CONDUITS

N

i View



#7

#5

#3

BUXTON RD

4.02

12.13

0.8

2.4

Lis 7016535

W

TENNYSON ST

8.0

37.0

Contact Officer	**Ben Adams**	**Melway's Reference**	**49 C9**
Company	**Zinfra**	**Number of O/H wires on pole**	**4 (ABC)**
		Post Instalation, The Number of Electrical Undergrounds on Pole:	**3**
Date Installed	**29-Nov-19**	**UE Drawing No**	**UE5/19-174464**

Referral
241651765

Member Phone
(03) 9619 1114

Responses from this member

Response received Tue 9 Jul 2024 3.46pm

File name	Page
Response Body	75
241651765.pdf	76

Request: 241651765
Enquirer: AGS Environmental - 3228334
Contact: Richard Walsh
Email: rwalsh@agses.com.au
Phone: +61477327323
Address: Unit 16,25 Gipps Street
Collingwood VIC 3066
Site Address: 1 Witt Street
Mitcham VIC 3132
Activity: Vertical Boring
Job Number: 37087975

Email disclaimer:
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To:
AGS Environmental - Richard Walsh
Unit 16,25 Gipps Street
Collingwood VIC 3066
rwalsh@agses.com.au

VicTrack has been advised that you have placed an enquiry through the Dial Before You Dig service, with the following details. Please be advised on the response.

Sequence Number	241651765
Enquiry Date	09/07/2024 15:44
Response	**AFFECTED WITHIN RAIL RESERVE**
Address	1 Witt Street Mitcham
Location in Road	
Activity	Vertical Boring

To obtain information and plans within the Rail Reserve forward your enquiry to External.Property@VICTRACK.com.au. Include a brief description of your intended works.

Please also see VicTrack's Network Protection Plan that must be adhered to and noted. This plan can be accessed from https://www.victrack.com.au/-/media/victrack/documents/engineering-standards/telecommunications-network-protection-plan.pdf. Information on VicTrack's Permit To Work requirements and application form are to be accessed from https://www.victrack.com.au/i-want-to/permit-to-work.

NB:The Cable details contained within this document and related attachments are valid for 14 days only.

If you have any queries, please contact:
External.Property@VICTRACK.com.au

Yours sincerely,

Joe De Luca
External Plant Manager

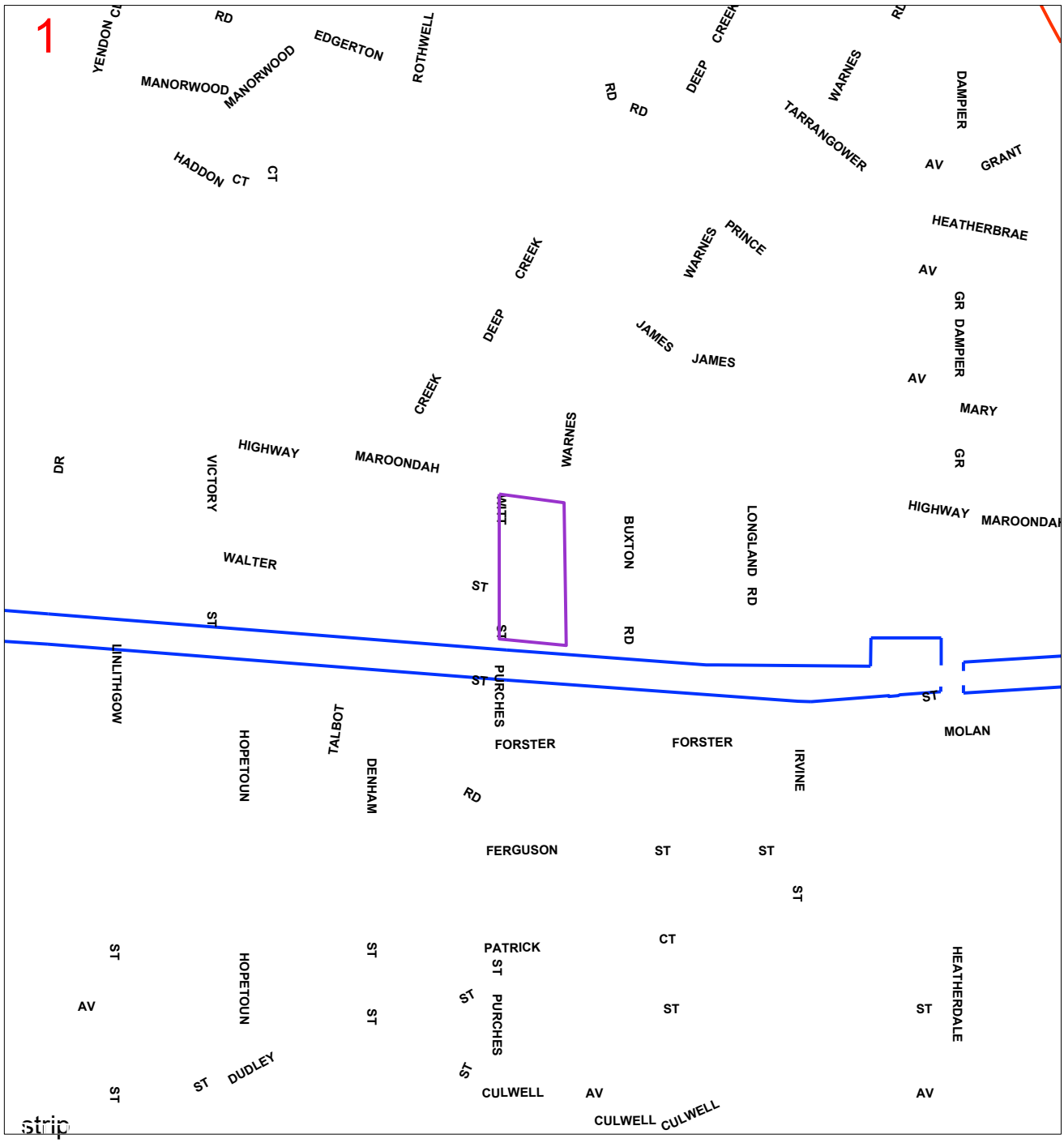
Vic Track's disclaimer
Please note that these Communication cable plans are only a guide and the drawings should not be scaled to locate the cable. No warranty is given that the information is accurate or complete.
Note - VicTrack does not have responsibility for the signalling cables that may be in the area, information for signalling cables can be obtained from ARTC (call Mr Mick Stoneham 0417 219 191) for standard gauge line / V/line (call Mr David Dunstan 0403 195640) for country and V/Line corridors) / Metro (call Signal Fault centre on 9619 2999) of Metro for signalling cables in the suburban area).

Date: 09/07/2024

Sequence No: 241651765

1 Witt Street Mitcham

Overview Map



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Whitehorse City Council

Referral
241651764

Member Phone
(03) 9262 6333

Responses from this member

Response received Tue 9 Jul 2024 3.45pm

File name	Page
Response Body	79
ASSET 241651764.pdf	80

WHITEHORSE
CITY COUNCIL

Whitehorse City Council
379-397 Whitehorse Road
Nunawading VIC 3131
Locked Bag 2 Nunawading VIC 3131

ABN: 39549568822

Telephone: (03) 9262 6333
Fax: (03)9262 6490
NRS: 133 677
TIS: 131 450

customer.service@whitehorse.vic.gov.au
www.whitehorse.vic.gov.au

Enquiries: DBYD@whitehorse.vic.gov.au

Dear Richard Walsh

BEFORE YOU DIG

Request Date: 9 July 2024
Job Number: 37087975
Sequence number: 241651764
Location: 1 Witt Street , Mitcham

Thank you for your enquiry received through Before You Dig (BYDA) requesting information about Council storm water assets. Please find attached plans showing Council's storm water assets in the vicinity of your works at the above location.

The above information is determined from internal design plans and/or available records and is provided to the applicant as a guide only. The exact location, suitability, condition, capacity and functionality of any Council drainage assets servicing the properties cannot be, and are not, guaranteed. The Council does not accept any responsibility or liability for the suitability, condition or functionality of any existing drainage assets.
Physical on-site proving of the location and condition of Council assets must be done by hand excavation, and by physical inspection
and testing, on the part of the customer.

For all works in road reserve and drainage easements, you will need to apply for the relevant permits and approvals before starting works. You might also require Temporary or Full Road closure or Work Zone Permit. Link to on-line applications provided below:

https://www.whitehorse.vic.gov.au/living-working/transport-and-roads/roads/asset-protection-roads-footpaths-and-vehicle-crossings

All works undertaken on an arterial roads will require Consent from VicRoads on telephone number 131171. Link to the application form provided below as well:
https://www.vicroads.vic.gov.au/business-and-industry/design-and-management/working-within-the-road-reserve

Should you require further information regarding these matters, please do not hesitate to contact Engineering Asset Team via e-mail DBYD@whitehorse.vic.gov.au.

Yours sincerely

MRJAM FABIJANIC
ENGINEERING ASSET CO-ORDINATOR
ENGINEERING AND ENVIRONMENTAL SERVICES DEPARTMENT

Job # 37087975
Seq # 241651764
Provider: Whitehorse City Council
Telephone: (03) 9262 7539

Legend

- BYDA Enquiry
- Detailed map page
- No dig site assets

Vicmap, Esri, HERE, Garmin, USGS

Disclaimer
The above Council drainage asset information is determined from internal design plans and/or available records and is provided to the applicant as a guide only. The exact location, suitability, condition, capacity and functionality of any Council drainage assets servicing the properties cannot be, and are not, guaranteed. The Council does not accept any responsibility or liability for the suitability, condition or functionality of any existing drainage assets.
Physical on-site proving of the location and condition of Council assets must be done by hand excavation, and by physical inspection and testing, on the part of the customer.

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In an emergency contact Whitehorse City Council on (03) 9262 6333
09/07/24 (valid for 30 days)

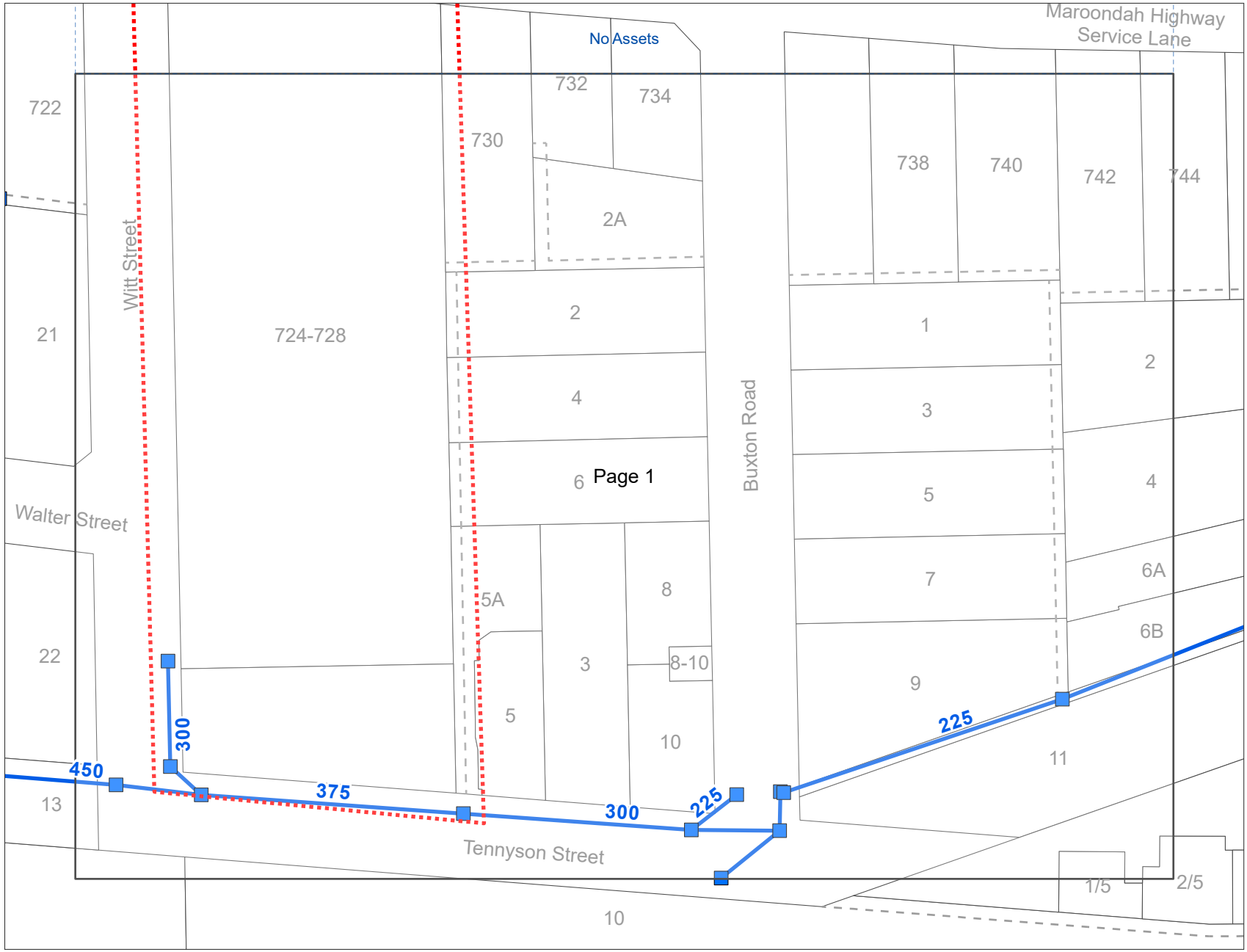
0 25 50 100 m

Scale 1:2,500

N

Plans generated by SmarterWX™ Automate

Job # 37087975
Seq # 241651764
Provider: Whitehorse City Council
Telephone: (03) 9262 7539



Legend
- BYDA Enquiry
- Pit
- Pipe
- Easement

Vicmap, Esri, HERE, Garmin, USGS

Disclaimer
The above Council drainage asset information is determined from internal design plans and/or available records and is provided to the applicant as a guide only. The exact location, suitability, condition, capacity and functionality of any Council drainage assets servicing the properties cannot be, and are not, guaranteed. The Council does not accept any responsibility or liability for the suitability, condition or functionality of any existing drainage assets.
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In an emergency contact Whitehorse City Council on (03) 9262 6333
09/07/24 (valid for 30 days)

0 10 20 40 m

Scale 1:1,000

Plans generated by
SmarterWX™ Automate

Yarra Valley Water Ltd

Referral
241651770

Member Phone
1300 853 811

Responses from this member

Response received Tue 9 Jul 2024 3.48pm

File name	Page
Response Body	83
241651770 Yarra Valley Water - Water Plan.pdf	85
241651770 Yarra Valley Water - Sewer Plan.pdf	88

Yarra Valley Water
ABN: 93 066 902 501
www.yvw.com.au

Date: 09 Jul 2024

To: Richard Walsh

Please DO NOT SEND A REPLY to this email as it has been automatically generated and replies are not monitored.

Thank you for your BYDA enquiry (referenced below).

Our records indicate that there are Yarra Valley Water assets directly impacted by the area illustrated within your enquiry.

WARNING: The location of assets must be verified on site prior to the commencement of work.

Please ensure that you read the attached documentation, as it contains important information including essential steps that must be undertaken prior to commencing your intended activities.

SEQUENCE NO.:	241651770
JOB NO.:	37087975
LOCATION:	1 Witt Street Mitcham VIC 3132

WARNING: When working in the vicinity of Yarra Valley Water's assets you have a legal *Duty of Care* that must be observed.

Minimum horizontal & vertical clearances (edge to edge) are required between your proposed works and Yarra Valley Water assets. Details of these minimum clearances can be obtained from Yarra Valley Water's website: WSAA Water - Sewer Clearances. Any conflict with the minimum clearance to your proposed works should be referred to Yarra Valley Water for further advice.

For assistance to locate assets, or if you require further information, please contact Yarra Valley Water by calling 1300 651 511

Important Notice

This enquiry response, including any associated documentation, has been assessed and compiled from the information detailed within the BYDA enquiry outlined above. **Please ensure that the BYDA enquiry details and this response accurately reflect your proposed works.**

Abandoned pipes may contain asbestos cement and/or fibro cement. Special work and handling procedures to deal with these potentially hazardous materials are required.

Metallic water mains and associated fittings may pose an electrocution hazard if electrical earth wires have been connected to the property service or water main. The contractor shall ensure that adequate electrical testing is carried out prior to working

on these mains. If a positive reading is recorded the contractor shall cease all works and notify the relevant power distributor, the customer and Yarra Valley Water.

This response is intended for use only by the addressee. If you have received the enquiry response in error, please let us know by telephone and delete all copies; you are advised that copying, distributing, disclosing or otherwise acting in reliance on the response is expressly prohibited.

Disclaimer: The plans accompanying this letter are issued solely for asset identification purposes and should not be used for any other purpose. Yarra Valley Water provides the information it has on Sewer, Water and Recycled Water assets but does not guarantee the accuracy of information and therefore the location of all assets must be proven on site prior to the commencement of any works.

Yarra Valley Water will not accept responsibility for or claims associated with any incorrect or incomplete information being contained on the plan. Due to ongoing potential asset changes this plan should not be reused at a later date, a new plan should be obtained.

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Yarra Valley Water nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

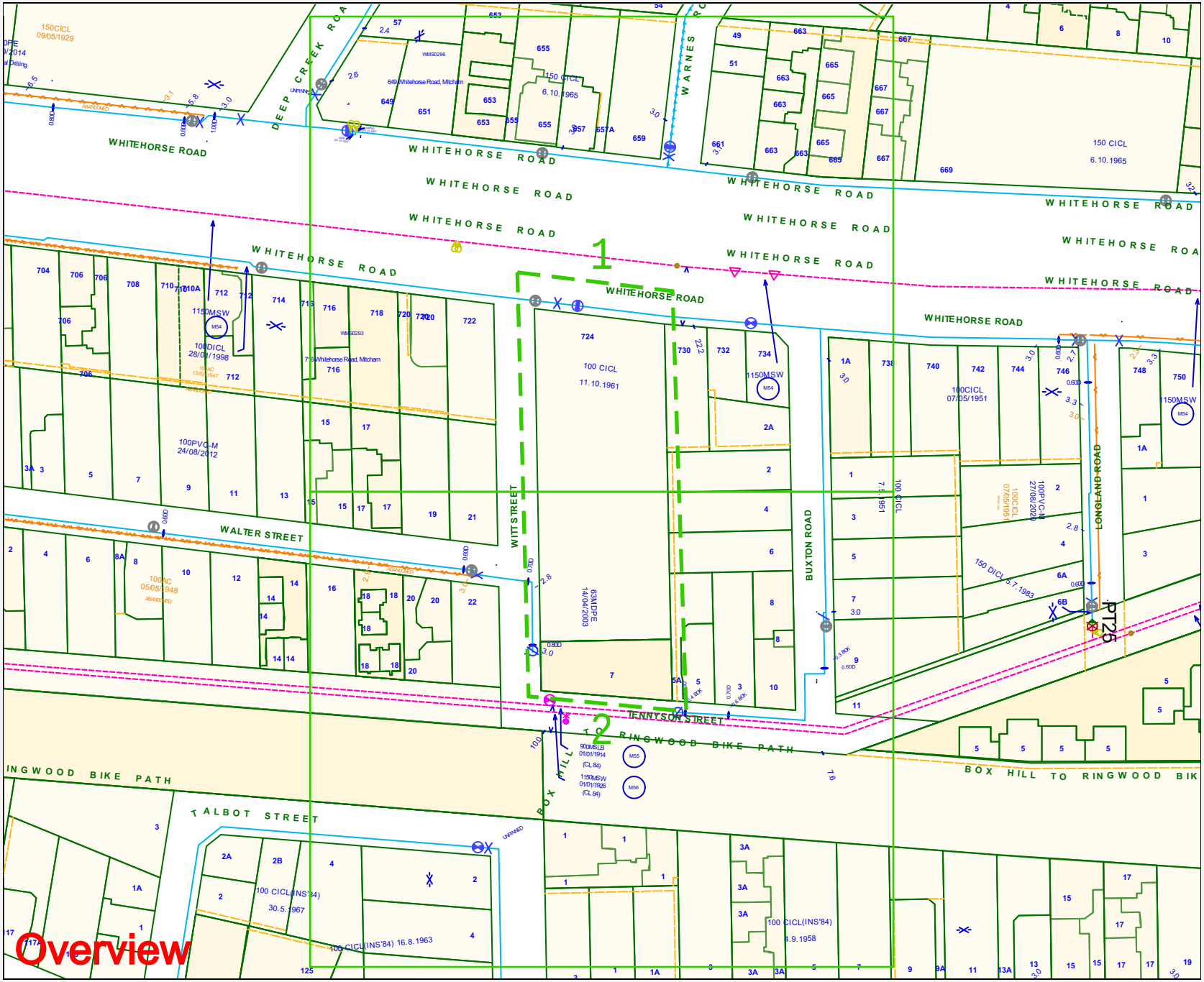
If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as Adobe Acrobat Reader (for PDF files)

Yarra Valley Water

Sequence No: 241651770
Job No: 37087975
Location: 1 Witt Street, Mitcham, VIC 3132

Water

BEFORE YOU DIG www.byda.com.au



Legend

- Existing Title
- Proposed Title
- Offset Water Main
- Water Main
- Water Reticulation Main
- Asbestos Water Main
- Blank End
- Water Valve
- Dialysis Patient

	YVW	Council
Hydrant Below Ground		
Hydrant Above Ground		

Warning – This plan is issued solely for the purpose of assisting you in identifying Yarra Valley Water's specified assets through further investigation only. It's not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. Please refer to the attached letter for further

N

Scale: 1:2050

Expires: 06 Aug 2024

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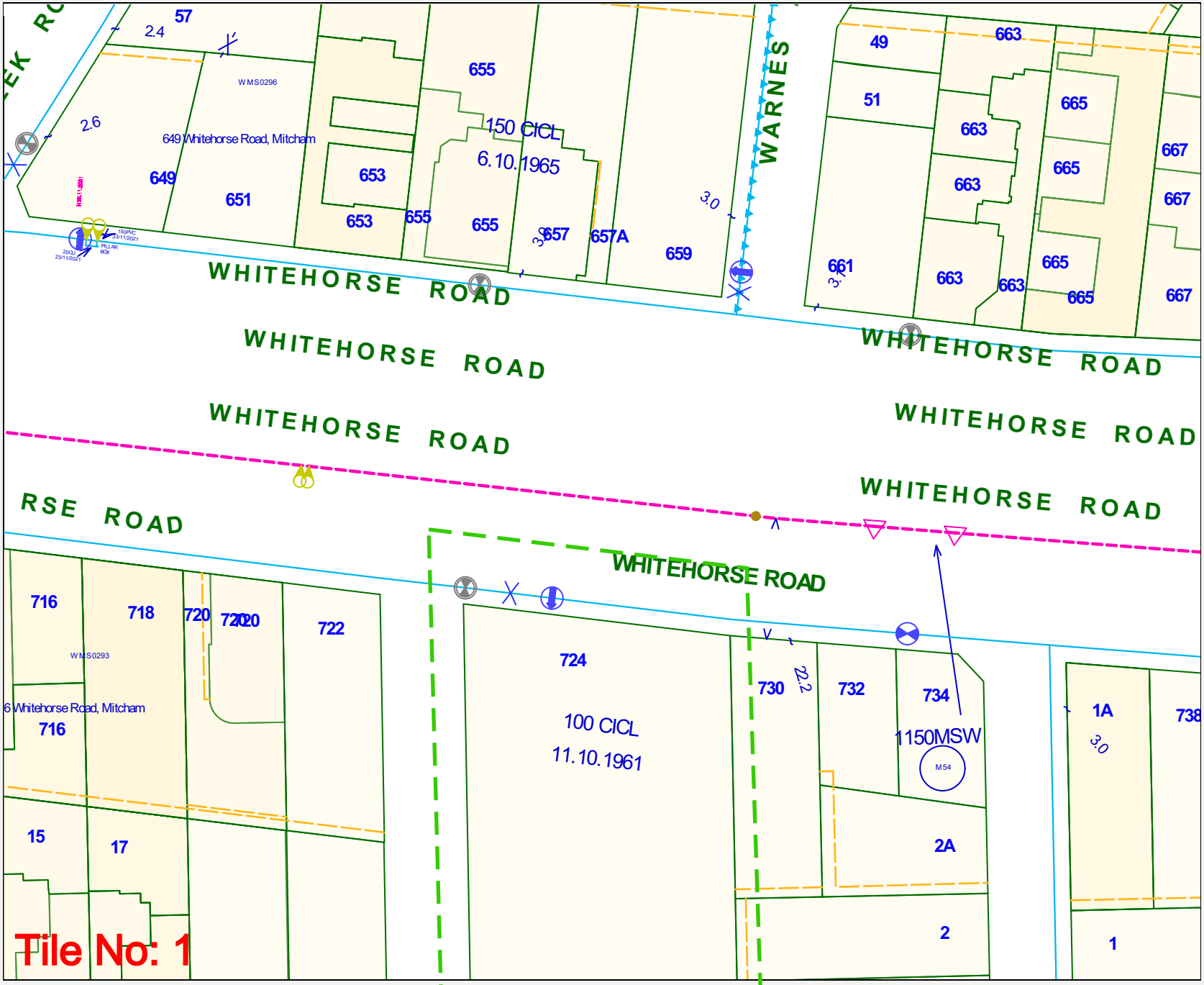
Yarra Valley Water

Sequence No: 241651770
Job No: 37087975
Location: 1 Witt Street, Mitcham, VIC 3132

Water

BEFORE YOU DIG www.byda.com.au



Legend

- Existing Title
- Proposed Title
- Offset Water Main
- Water Main
- Water Reticulation Main
- Asbestos Water Main
- Blank End
- Water Valve
- Dialysis Patient

	YVW	Council
Hydrant Below Ground		
Hydrant Above Ground		

Warning – This plan is issued solely for the purpose of assisting you in identifying Yarra Valley Water's specified assets through further investigation only. It's not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. Please refer to the attached letter for further

N

Scale: 1:1000

Expires: 06 Aug 2024

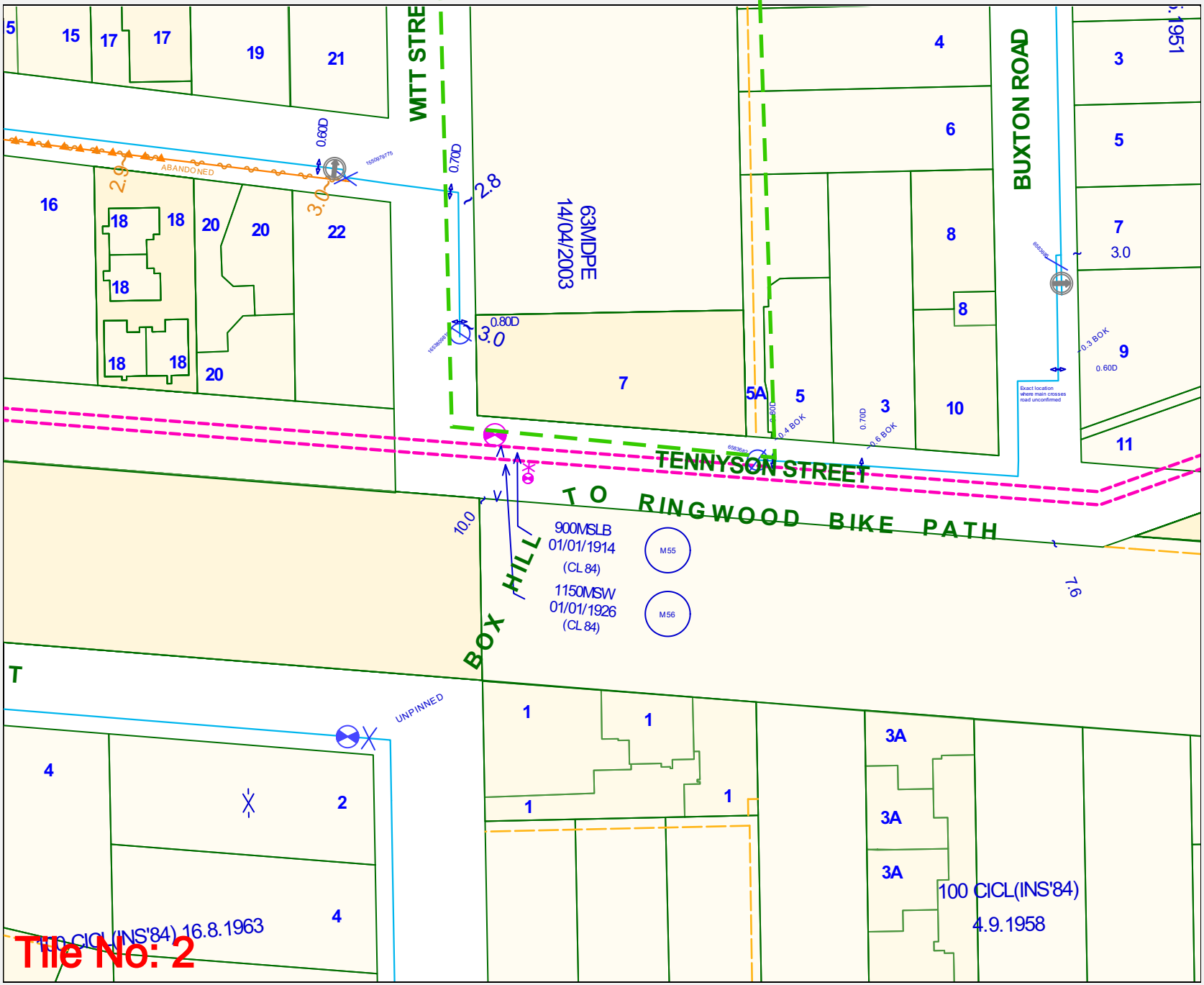
DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Yarra Valley Water nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

Yarra Valley Water

Sequence No: 241651770
Job No: 37087975
Location: 1 Witt Street, Mitcham, VIC 3132

Water

BEFORE YOU DIG www.byda.com.au



Legend

- Existing Title
- Proposed Title
- Offset Water Main
- Water Main
- Water Reticulation Main
- Asbestos Water Main
- Blank End
- Water Valve
- Dialysis Patient

	YVW	Council
Hydrant Below Ground		
Hydrant Above Ground		

Warning – This plan is issued solely for the purpose of assisting you in identifying Yarra Valley Water's specified assets through further investigation only. It's not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. Please refer to the attached letter for further

N

Scale: 1:1000

Expires: 06 Aug 2024

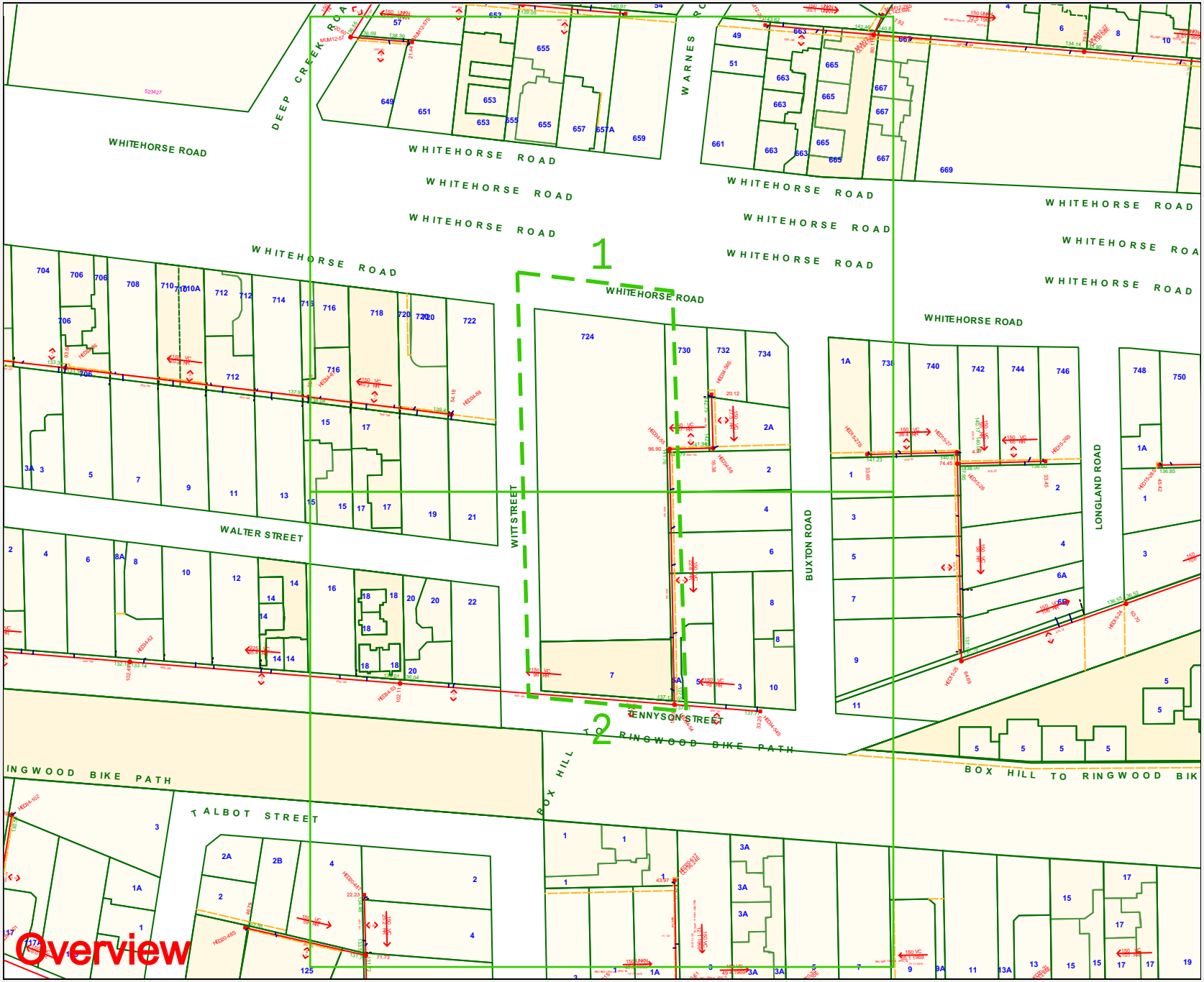
DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Yarra Valley Water nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

Yarra Valley Water

Sequence No: 241651770
Job No: 37087975
Location: 1 Witt Street, Mitcham, VIC 3132

Sewer

BEFORE YOU DIG www.byda.com.au



Overview

Legend

- Existing Title
- Proposed Title
- Existing Sewer
- Asbestos Sewer
- Offset Distance (1.05)
- Circular Access Point
- Junction
- Square Manhole
- End of Pipe
- Maintenance Shaft
- Ventilation
- Chambered Manhole

Warning – This plan is issued solely for the purpose of assisting you in identifying Yarra Valley Water's specified assets through further investigation only. It's not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. Please refer to the attached letter for further

N

Scale: 1:2050

Expires: 06 Aug 2024

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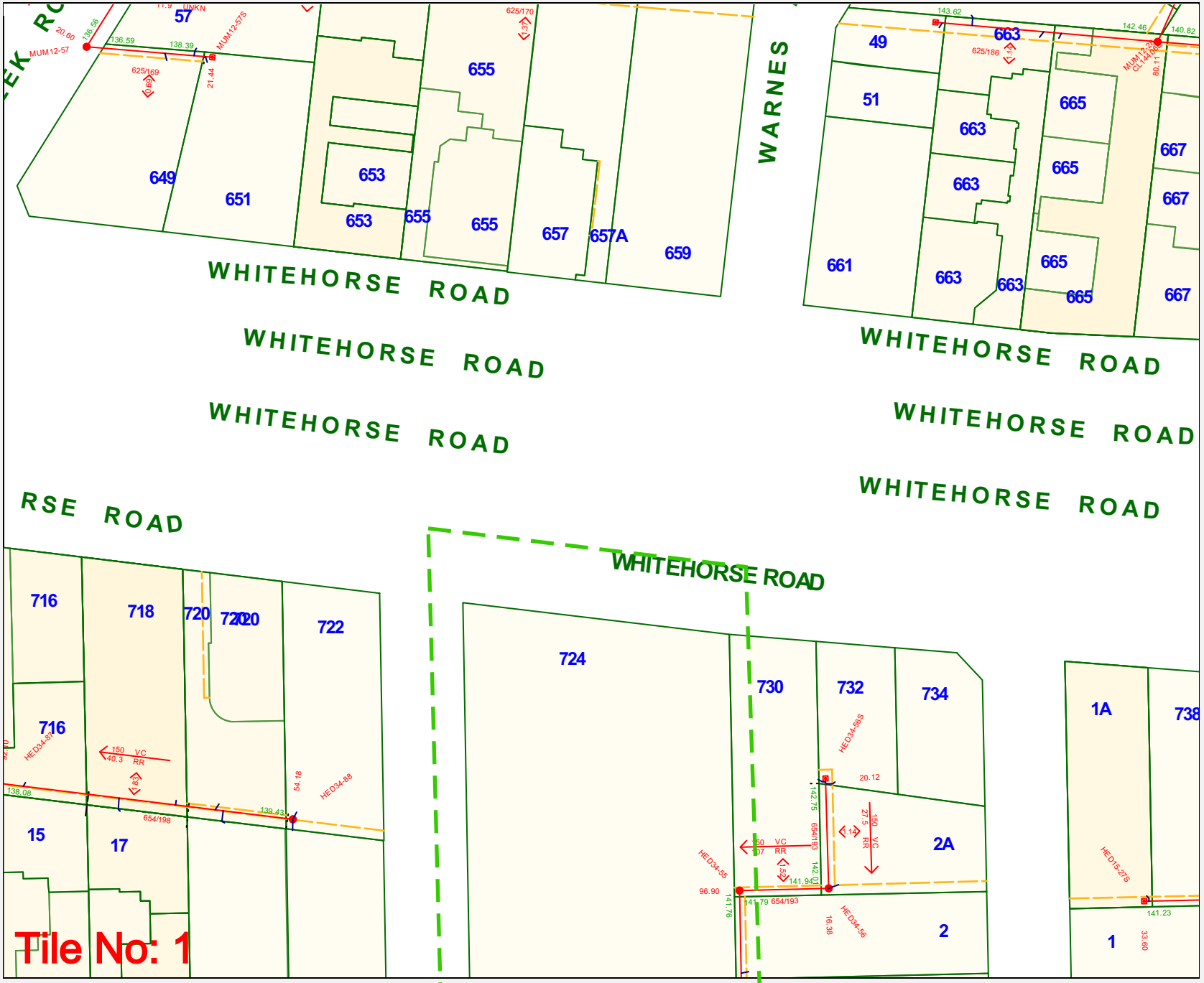
Yarra Valley Water

Sequence No: 241651770
Job No: 37087975
Location: 1 Witt Street, Mitcham, VIC 3132

Sewer

BEFORE YOU DIG www.byda.com.au



Legend

- Existing Title
- Proposed Title
- Existing Sewer
- Asbestos Sewer
- Offset Distance
- Circular Access Point
- Junction
- Square Manhole
- End of Pipe
- Maintenance Shaft
- Ventilation
- Chambered Manhole

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N

Scale: 1:1000

Expires: 06 Aug 2024

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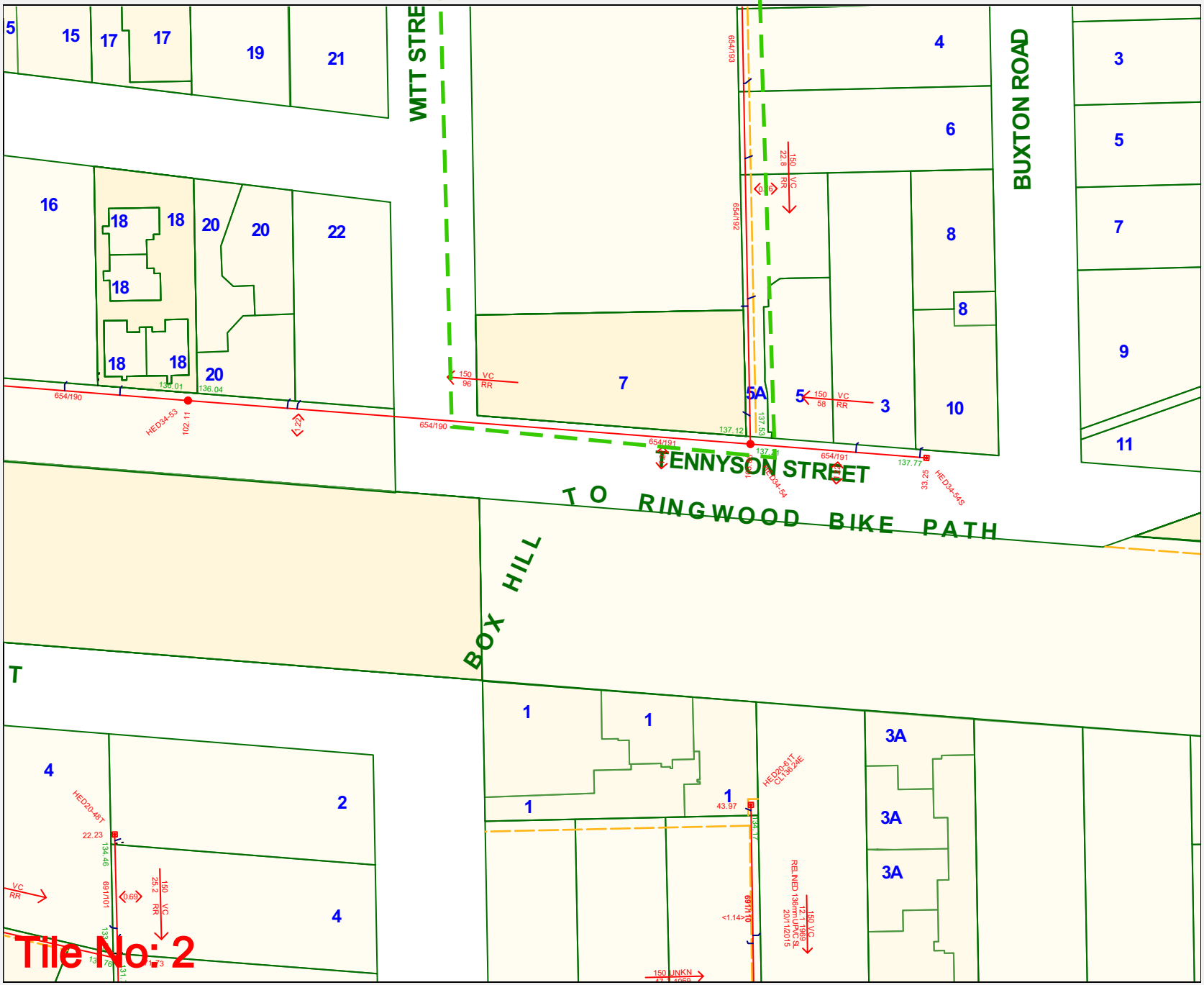
Yarra Valley Water

Sequence No: 241651770
Job No: 37087975
Location: 1 Witt Street, Mitcham, VIC 3132

Sewer

BEFORE YOU DIG www.byda.com.au



Legend

- Existing Title
- Proposed Title
- Existing Sewer
- Asbestos Sewer
- Offset Distance
- Circular Access Point
- Junction
- Square Manhole
- End of Pipe
- Maintenance Shaft
- Ventilation
- Chambered Manhole

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N

Scale: 1:1000

Expires: 06 Aug 2024

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End of document

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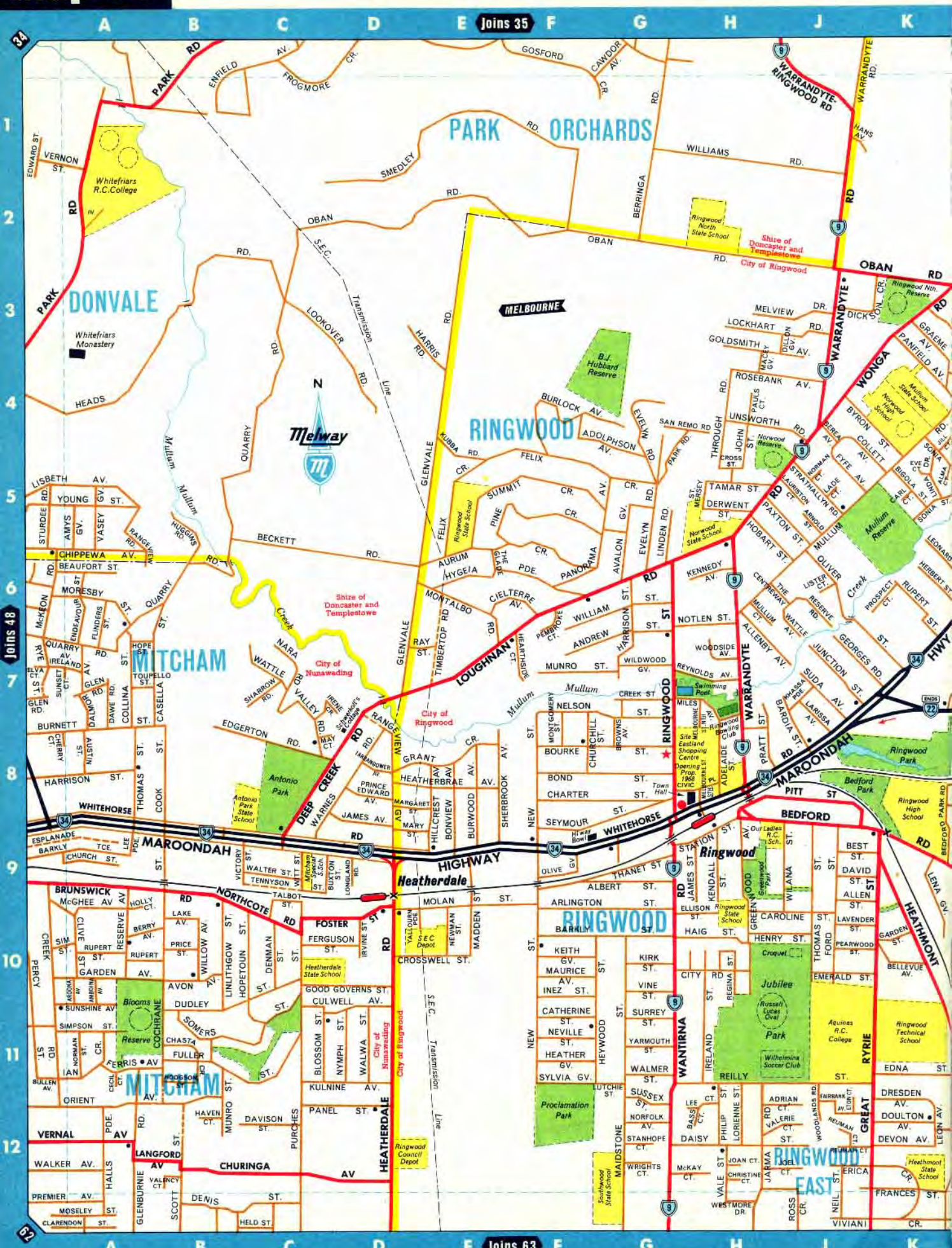
APPENDIX G

Map 49

For explanation of map symbols see Page 4

Highways and Major routes
Alternative routes
Other roads


A B C D E Joins 35 F G H J K
1 2 3 4 5 6 7 8 9 10 11 12
Joins 48
Joins 63
PARK ORCHARDS
DONVALE
RINGWOOD
MITCHAM
RINGWOOD EAST
Heatherdale
Ringwood
MELBOURNE
Whitefriars R.C.College
Whitefriars Monastery
Melway
Shire of Doncaster and Templestowe
City of Ringwood
City of Nunawading
Mullum Creek
Deep Creek
Antonio Park
B.J. Hubbard Reserve
Mullum Reserve
Ringwood Park
Bedford Park
Blooms Reserve
Jubilee Park
Proclamation Park
Ringwood North State School
Ringwood State School
Norwood State School
Mullum State School
Norwood High School
Ringwood High School
Heatherdale State School
Antonia Park State School
Mitcham Special School
Ringwood Technical School
Aquinas R.C. College
Southwood State School
Heathmont State School
Ringwood Council Depot
S.E.C. Depot
Transmission Line
Site of Eastland Shopping Centre
Opening Prop. 1968 CIVIC
Town Hall
Swimming Pool
Ringwood Bowling Club
Hi Way Bowl
Croquet
Wilhelmina Soccer Club
Ringwood Nth. Reserve
Mullum Reserve
Our Ladies R.C. Sch.
Greenwood Park
Ringwood State School
Russell Lucas Oval
Ringwood Nth. State School
Norwood Reserve
Schonwolf's College
Mitcham Special School
Ringwood Bowling Club
Ringwood Park
Bedford Park
Ringwood High School
Ringwood Technical School
Aquinas R.C. College
Heathmont State School
Southwood State School
Proclamation Park
Jubilee Park
Wilhelmina Soccer Club
Croquet
Ringwood Council Depot
S.E.C. Depot
Transmission Line
Site of Eastland Shopping Centre
Opening Prop. 1968 CIVIC
Town Hall
Swimming Pool
Ringwood Bowling Club
Hi Way Bowl
Ringwood North State School
Ringwood State School
Norwood State School
Mullum State School
Norwood High School
Ringwood Nth. Reserve
Mullum Reserve
Our Ladies R.C. Sch.
Greenwood Park
Ringwood State School
Russell Lucas Oval

APPENDIX H

AGS

ENVIRONMENTAL SERVICES

16 / 25 Gipps Street, Collingwood, 3066

email: lab@agses.com.au

Project Number: AGS240210
Project Name: Mitcham
Project Manager: John Hogan

Page: 1 of 1
Laboratory: Eurofins
Sampled By: AR/JH

Requested Turn-Around Time

1 DAY	
2 DAY	
3 DAY	
5 DAY	X

Sample ID	Date Sampled	Time	SAMPLE: Water	Soil	Sediment	Other	CONTAINER: 500ml Plastic	250ml Plastic	125ml Plastic	Amber	Vial	Glass Jar	Other	ANALYICAL SUITE: Suite B7: TRH, BTEXN, PAH 8 Metals	R1: VIC EPA Screen	Hold	Comments
SB01/0.2	12/07/2024	AM		X								X		X			
SB01/0.5	12/07/2024	AM		X								X				X	
SB02/0.2	12/07/2024	AM		X								X			X		
SB02/0.6	12/07/2024	AM		X								X				X	
SB03/0.2	12/07/2024	AM		X								X			X		
SB03/0.6	12/07/2024	AM		X								X				X	
SB04/0.2	12/07/2024	AM		X								X			X		
SB04/0.6	12/07/2024	AM		X								X				X	
SB05/0.2	12/07/2024	AM		X								X			X		
SB05/0.6	12/07/2024	AM		X								X				X	
SB06/0.2	12/07/2024	AM		X								X		X			
SB06/0.6	12/07/2024	AM		X								X				X	
SB07/0.2	12/07/2024	AM		X								X			X		
SB07/0.6	12/07/2024	AM		X								X				X	
SB08/0.2	12/07/2024	AM		X								X			X		
SB08/0.6	12/07/2024	AM		X								X				X	
SB09/0.2	12/07/2024	AM		X								X			X		
SB09/0.6	12/07/2024	AM		X								X				X	
SB10/0.2	12/07/2024	AM		X								X			X		
SB10/0.6	12/07/2024	AM		X								X				X	
Total Samples														2	8	10	

12/7/24 SM 1563

Investigator: I attest that the proper field sampling procedures were used in the collection of these samples.

Sampler name(s): Annabelle Rix/ John Hogan

Date: 12/07/2024

Relinquished By:	Date / Time:	Received By:	Date / Time:	Relinquished By:	Date / Time:	Received By:	Date / Time:
Annabelle Rix	12/07/24		12/7/24				
Company: AGS Environmental Services		Company: Eurofins		Company:		Company:	

Ice

8.0°C.

2:47pm

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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NATA# 2377
Site# 2370

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WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

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NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: AGS ENVIRONMENTAL SERVICES P/L
Contact name: -All COCs/SRAs/Reports
Project name: MICTHAM
Project ID: AGS240210
Turnaround time: 5 Day
Date/Time received Jul 12, 2024 2:47 PM
Eurofins reference 1117563

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Savini Suduweli on phone : +61 3 8564 5051 or by email: SaviniSuduweli@eurofins.com

Results will be delivered electronically via email to -All COCs/SRAs/Reports - lab@agses.com.au.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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NATA# 2377
Site# 2370

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NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: AGS ENVIRONMENTAL SERVICES P/L
Address: 16/25 Gipps St
Collingwood
VIC 3066

Project Name: MICTHAM
Project ID: AGS240210

Order No.:
Report #: 1117563
Phone: 8528 1480
Fax:

Received: Jul 12, 2024 2:47 PM
Due: Jul 19, 2024
Priority: 5 Day
Contact Name: -All COCs/SRAs/Reports

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD*	Moisture Set	Eurofins Suite B7	Vic EPA 1828.2 Table 3 (Solids)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	SB01/0.2	Jul 12, 2024		Soil	M24-Jl0033402		X	X	
2	SB02/0.2	Jul 12, 2024		Soil	M24-Jl0033403		X		X
3	SB03/0.2	Jul 12, 2024		Soil	M24-Jl0033404		X		X
4	SB04/0.2	Jul 12, 2024		Soil	M24-Jl0033405		X		X
5	SB05/0.2	Jul 12, 2024		Soil	M24-Jl0033406		X		X
6	SB06/0.2	Jul 12, 2024		Soil	M24-Jl0033407		X	X	
7	SB07/0.2	Jul 12, 2024		Soil	M24-Jl0033408		X		X
8	SB08/0.2	Jul 12, 2024		Soil	M24-Jl0033409		X		X
9	SB09/0.2	Jul 12, 2024		Soil	M24-Jl0033410		X		X
10	SB10/0.2	Jul 12, 2024		Soil	M24-Jl0033411		X		X
11	SB01/0.5	Jul 12, 2024		Soil	M24-Jl0033412	X			
12	SB02/0.6	Jul 12, 2024		Soil	M24-Jl0033413	X			
13	SB03/0.6	Jul 12, 2024		Soil	M24-Jl0033414	X			
14	SB04/0.6	Jul 12, 2024		Soil	M24-Jl0033415	X			

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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+61 8 6253 4444
NATA# 2377
Site# 2370

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NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
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Company Name: AGS ENVIRONMENTAL SERVICES P/L
Address: 16/25 Gipps St
Collingwood
VIC 3066

Project Name: MICTHAM
Project ID: AGS240210

Order No.:
Report #: 1117563
Phone: 8528 1480
Fax:

Received: Jul 12, 2024 2:47 PM
Due: Jul 19, 2024
Priority: 5 Day
Contact Name: -All COCs/SRAs/Reports

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD*	Moisture Set	Eurofins Suite B7	Vic EPA 1828.2 Table 3 (Solids)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
15	SB05/0.6	Jul 12, 2024		Soil	M24-Jl0033416	X			
16	SB06/0.6	Jul 12, 2024		Soil	M24-Jl0033417	X			
17	SB07/0.6	Jul 12, 2024		Soil	M24-Jl0033418	X			
18	SB08/0.6	Jul 12, 2024		Soil	M24-Jl0033419	X			
19	SB09/0.6	Jul 12, 2024		Soil	M24-Jl0033420	X			
20	SB10/0.6	Jul 12, 2024		Soil	M24-Jl0033421	X			
Test Counts						10	10	2	8

APPENDIX I

AGS
ENVIRONMENTAL SERVICES

ANALYTICAL SUMMARY TABLE - SOIL

Project ID: AGS240210

		Metals												
		Arsenic	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		2	0.4	1	5	5	5	0.1	5	5	2	2	10	5
EPA Vic IWRG1828.2 Category B		2,000	400	2,000		20,000	6,000	300	4,000	12,000	40,000	720		140,000
EPA Vic IWRG1828.2 Category C		500	100	500		5,000	1,500	75	1,000	3,000	10,000	180		35,000
EPA Vic IWRG1828.2 Category D		500	100	500		5,000	1,500	75	1,000	3,000	10,000	180		35,000
EPA Vic IWRG1828.2 Fill material		20	3	1		100	300	1	40	60	10	10	50	200
NEPM 2013 Table 1A(1) HILs Res A Soil		100	20	100		6,000	300	40		400	200			7,400
Field ID	Date													
SB01/0.2	12 Jul 2024	4.0	<0.4	<1	16	15	22	<0.1	<5	6.1	<2	<2	<10	59
SB02/0.2	12 Jul 2024	6.8	<0.4	-	51	19	34	<0.1	-	14	-	-	-	120
SB03/0.2	12 Jul 2024	7.6	<0.4	-	120	<5	18	<0.1	-	9.0	-	-	-	6.3
SB04/0.2	12 Jul 2024	3.9	<0.4	-	62	10.0	11	<0.1	-	32	-	-	-	17
SB05/0.2	12 Jul 2024	4.6	<0.4	-	68	<5	12	<0.1	-	8.8	-	-	-	6.3
SB06/0.2	12 Jul 2024	2.5	<0.4	<1	29	11	9.7	<0.1	<5	23	<2	<2	<10	18
SB07/0.2	12 Jul 2024	27	<0.4	-	40	10	21	<0.1	-	7.1	-	-	-	24
SB08/0.2	12 Jul 2024	2.3	<0.4	-	8.1	15	28	<0.1	-	<5	-	-	-	120
SB09/0.2	12 Jul 2024	3.1	<0.4	-	11	45	50	<0.1	-	7.3	-	-	-	600
SB10/0.2	12 Jul 2024	3.5	<0.4	-	10	18	32	<0.1	-	<5	-	-	-	190

Environmental Standards
EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category B upper limit
EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category C upper limit
EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit
EPA Victoria, July 2021, EPA Vic IWRG1828.2 Fill material upper limit
2013, NEPM 2013 Table 1A(1) HILs Res A Soil

Date: 24/07/2024

		Inorganics				TPH					TRH			
		Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (1:5 aqueous extract)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)
		mg/kg	mg/kg	%	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		5	100	1	0.1	20	20	50	50	50	20	20	50	50
EPA Vic IWRG1828.2 Category B		10,000	40,000			2,600				40,000				
EPA Vic IWRG1828.2 Category C		2,500	10,000			650				10,000				
EPA Vic IWRG1828.2 Category D		2,500	10,000			325				5,000				
EPA Vic IWRG1828.2 Fill material		50	450			100				1,000				
NEPM 2013 Table 1A(1) HILs Res A Soil														
Field ID	Date													
SB01/0.2	12 Jul 2024	<5	<100	14	7.7	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB02/0.2	12 Jul 2024	-	-	18	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB03/0.2	12 Jul 2024	-	-	27	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB04/0.2	12 Jul 2024	-	-	19	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB05/0.2	12 Jul 2024	-	-	20	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB06/0.2	12 Jul 2024	<5	<100	17	7.2	<20	<20	<50	<50	60	<20	<20	<50	<50
SB07/0.2	12 Jul 2024	-	-	18	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB08/0.2	12 Jul 2024	-	-	19	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB09/0.2	12 Jul 2024	-	-	34	-	<20	<20	<50	<50	<50	<20	<20	<50	<50
SB10/0.2	12 Jul 2024	-	-	18	-	<20	<20	<50	<50	<50	<20	<20	<50	<50

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						BTEX						MAH			
		>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		100	100	100	0.5	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5
EPA Vic IWRG1828.2 Category B						16	12,800	4,800			9,600			
EPA Vic IWRG1828.2 Category C						4	3,200	1,200			2,400			
EPA Vic IWRG1828.2 Category D						4	3,200	1,200			2,400			
EPA Vic IWRG1828.2 Fill material						1								
NEPM 2013 Table 1A(1) HILs Res A Soil														
Field ID	Date													
SB01/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5
SB02/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB03/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB04/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB05/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB06/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5
SB07/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB08/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB09/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-
SB10/0.2	12 Jul 2024	<100	<100	<100	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-

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			Solvents												
		Styrene	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPA Vic IWRG1828.2 Category B		480	32,000					1,600	4,800	210	190		480	
EPA Vic IWRG1828.2 Category C		120	8,000					400	1,200	52	48		120	
EPA Vic IWRG1828.2 Category D		120	8,000					400	1,200	52	48		120	
EPA Vic IWRG1828.2 Fill material														
NEPM 2013 Table 1A(1) HILs Res A Soil														
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-

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		Chlorinated Hydrocarbons												
		1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPA Vic IWRG1828.2 Category B		48						48			960			
EPA Vic IWRG1828.2 Category C		12						12			240			
EPA Vic IWRG1828.2 Category D		12						12			240			
EPA Vic IWRG1828.2 Fill material														
NEPM 2013 Table 1A(1) HILs Res A Soil														
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-

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													Halogenated Benzenes	
		Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPA Vic IWRG1828.2 Category B			64	11	80	800			4.8		24,000		640	
EPA Vic IWRG1828.2 Category C			16	2.8	20	200			1.2		6,000		160	
EPA Vic IWRG1828.2 Category D			16	2.8	20	200			1.2		6,000		160	
EPA Vic IWRG1828.2 Fill material														
NEPM 2013 Table 1A(1) HILs Res A Soil														
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-

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					Halogenated Hydrocarbons										
		Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPA Vic IWRG1828.2 Category B			4,800											160
EPA Vic IWRG1828.2 Category C			1,200											40
EPA Vic IWRG1828.2 Category D			1,200											20
EPA Vic IWRG1828.2 Fill material														1
NEPM 2013 Table 1A(1) HILs Res A Soil				10										
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB06/0.2	12 Jul 2024	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5

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		PAH												
		Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPA Vic IWRG1828.2 Category B														
EPA Vic IWRG1828.2 Category C														
EPA Vic IWRG1828.2 Category D														
EPA Vic IWRG1828.2 Fill material														
NEPM 2013 Table 1A(1) HILs Res A Soil													3	3
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB02/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB03/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB04/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB05/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB06/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB07/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB08/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB09/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
SB10/0.2	12 Jul 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2

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				Phenols											
		Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	3&4-Methylphenol (m&p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.4	1	1	0.5	0.5	5	0.5	0.5	0.2	1	5
EPA Vic IWRG1828.2 Category B			400		64,000	320	3,200				4,800			
EPA Vic IWRG1828.2 Category C			100		16,000	80	800				1,200			
EPA Vic IWRG1828.2 Category D			50		16,000	80	800				1,200			
EPA Vic IWRG1828.2 Fill material			20											
NEPM 2013 Table 1A(1) HILs Res A Soil		3	300											
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.5	<0.5	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5
SB02/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<0.5	<0.5	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5
SB07/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-

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									Herbicides					
		4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-Nitrophenol	Cresol Total	Pentachlorophenol	Tetrachlorophenols	Phenol	Dinoseb	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		20	1	5	0.5	1	10	0.5	20	0.05	0.05	0.05	0.05	0.1
EPA Vic IWRG1828.2 Category B					32,000									16
EPA Vic IWRG1828.2 Category C					8,000									4
EPA Vic IWRG1828.2 Category D					8,000									4
EPA Vic IWRG1828.2 Fill material														
NEPM 2013 Table 1A(1) HILs Res A Soil					400	100		3,000						50
Field ID	Date													
SB01/0.2	12 Jul 2024	<20	<1	<5	<0.5	<1	<10	<0.5	<20	<0.05	<0.05	<0.05	<0.05	<0.1
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<20	<1	<5	<0.5	<1	<10	<0.5	<20	<0.05	<0.05	<0.05	<0.05	<0.1
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 |
2013, NEPM 2013 Table 1A(1) HILs Res A Soi

		Organochlorine Pesticides												
		d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
EPA Vic IWRG1828.2 Category B													4.8	
EPA Vic IWRG1828.2 Category C													1.2	
EPA Vic IWRG1828.2 Category D													1.2	
EPA Vic IWRG1828.2 Fill material														
NEPM 2013 Table 1A(1) HILs Res A Soil									10				6	
Field ID	Date													
SB01/0.2	12 Jul 2024	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
2013, NEPM 2013 Table 1A(1) HILs Res A Soi

				PCBs							
		Methoxychlor	Toxaphene	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.05	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EPA Vic IWRG1828.2 Category B											
EPA Vic IWRG1828.2 Category C											50
EPA Vic IWRG1828.2 Category D											2
EPA Vic IWRG1828.2 Fill material											2
NEPM 2013 Table 1A(1) HILs Res A Soil		300	20								1
Field ID	Date										
SB01/0.2	12 Jul 2024	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SB02/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB03/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB04/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB05/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB06/0.2	12 Jul 2024	<0.05	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SB07/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB08/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB09/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-
SB10/0.2	12 Jul 2024	-	-	-	-	-	-	-	-	-	-

Environmental Standards
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 (
EPA Victoria, July 2021, EPA Vic IWRG1828.2 |
2013, NEPM 2013 Table 1A(1) HILs Res A Soi

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.2 24/07/2024 8:13:10 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic

General Statistics

Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	2.3	Mean	6.53
Maximum	27	Median	3.95
SD	7.396	Std. Error of Mean	2.339
Coefficient of Variation	1.133	Skewness	2.858

Normal GOF Test

Shapiro Wilk Test Statistic	0.572	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.781	Data Not Normal at 1% Significance Level
Lilliefors Test Statistic	0.342	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.304	Data Not Normal at 1% Significance Level

Data Not Normal at 1% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	10.82	95% Adjusted-CLT UCL (Chen-1995)	12.64
		95% Modified-t UCL (Johnson-1978)	11.17

Gamma GOF Test

A-D Test Statistic	1.029	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.737	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.271	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.27	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.753	k star (bias corrected MLE)	1.293
Theta hat (MLE)	3.726	Theta star (bias corrected MLE)	5.048
nu hat (MLE)	35.05	nu star (bias corrected)	25.87
MLE Mean (bias corrected)	6.53	MLE Sd (bias corrected)	5.742
		Approximate Chi Square Value (0.05)	15.28
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	13.88

Assuming Gamma Distribution

95% Approximate Gamma UCL	11.06	95% Adjusted Gamma UCL	12.17

	A	B	C	D	E	F	G	H	I	J	K	L
51	**Lognormal GOF Test**											
52					Shapiro Wilk Test Statistic	0.845	**Shapiro Wilk Lognormal GOF Test**					
53					10% Shapiro Wilk Critical Value	0.869	Data Not Lognormal at 10% Significance Level					
54					Lilliefors Test Statistic	0.221	**Lilliefors Lognormal GOF Test**					
55					10% Lilliefors Critical Value	0.241	Data appear Lognormal at 10% Significance Level					
56	**Data appear Approximate Lognormal at 10% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	0.833			Mean of logged Data			1.565
60					Maximum of Logged Data	3.296			SD of logged Data			0.719
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	11.45			90% Chebyshev (MVUE) UCL			10.23
64					95% Chebyshev (MVUE) UCL	12.15			97.5% Chebyshev (MVUE) UCL			14.81
65					99% Chebyshev (MVUE) UCL	20.03						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	10.38			95% BCA Bootstrap UCL			13.47
72					95% Standard Bootstrap UCL	10.33			95% Bootstrap-t UCL			22.62
73					95% Hall's Bootstrap UCL	23.68			95% Percentile Bootstrap UCL			10.98
74					90% Chebyshev(Mean, Sd) UCL	13.55			95% Chebyshev(Mean, Sd) UCL			16.73
75					97.5% Chebyshev(Mean, Sd) UCL	21.14			99% Chebyshev(Mean, Sd) UCL			29.8
76												
77	**Suggested UCL to Use**											
78					95% H-UCL	11.45						
79												
80	**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**											
81	**Please verify the data were collected from random locations.**											
82	**If the data were collected using judgmental or other non-random methods,**											
83	**then contact a statistician to correctly calculate UCLs.**											
84												
85	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
86	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
88												
89												
90	**Zinc**											
91												
92	**General Statistics**											
93					Total Number of Observations	10			Number of Distinct Observations			8
94									Number of Missing Observations			0
95					Minimum	6.3			Mean			116.1
96					Maximum	600			Median			41.5
97					SD	181			Std. Error of Mean			57.25
98					Coefficient of Variation	1.56			Skewness			2.533
99												
100	**Normal GOF Test**											

101				Shapiro Wilk Test Statistic		0.648	**Shapiro Wilk GOF Test**					
102				1% Shapiro Wilk Critical Value		0.781	Data Not Normal at 1% Significance Level					
103				Lilliefors Test Statistic		0.291	**Lilliefors GOF Test**					
104				1% Lilliefors Critical Value		0.304	Data appear Normal at 1% Significance Level					
105	**Data appear Approximate Normal at 1% Significance Level**											
106												
107	**Assuming Normal Distribution**											
108	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
109				95% Student's-t UCL		221	95% Adjusted-CLT UCL (Chen-1995)					259.2
110							95% Modified-t UCL (Johnson-1978)					228.6
111												
112	**Gamma GOF Test**											
113				A-D Test Statistic		0.432	**Anderson-Darling Gamma GOF Test**					
114				5% A-D Critical Value		0.766	Detected data appear Gamma Distributed at 5% Significance Level					
115				K-S Test Statistic		0.208	**Kolmogorov-Smirnov Gamma GOF Test**					
116				5% K-S Critical Value		0.278	Detected data appear Gamma Distributed at 5% Significance Level					
117	**Detected data appear Gamma Distributed at 5% Significance Level**											
118												
119	**Gamma Statistics**											
120				k hat (MLE)		0.634	k star (bias corrected MLE)					0.511
121				Theta hat (MLE)		183	Theta star (bias corrected MLE)					227.3
122				nu hat (MLE)		12.69	nu star (bias corrected)					10.21
123				MLE Mean (bias corrected)		116.1	MLE Sd (bias corrected)					162.4
124							Approximate Chi Square Value (0.05)					4.076
125				Adjusted Level of Significance		0.0267	Adjusted Chi Square Value					3.429
126												
127	**Assuming Gamma Distribution**											
128				95% Approximate Gamma UCL		290.8	95% Adjusted Gamma UCL					345.7
129												
130	**Lognormal GOF Test**											
131				Shapiro Wilk Test Statistic		0.945	**Shapiro Wilk Lognormal GOF Test**					
132				10% Shapiro Wilk Critical Value		0.869	Data appear Lognormal at 10% Significance Level					
133				Lilliefors Test Statistic		0.156	**Lilliefors Lognormal GOF Test**					
134				10% Lilliefors Critical Value		0.241	Data appear Lognormal at 10% Significance Level					
135	**Data appear Lognormal at 10% Significance Level**											
136												
137	**Lognormal Statistics**											
138				Minimum of Logged Data		1.841	Mean of logged Data					3.788
139				Maximum of Logged Data		6.397	SD of logged Data					1.516
140												
141	**Assuming Lognormal Distribution**											
142				95% H-UCL		1191	90% Chebyshev (MVUE) UCL					288.7
143				95% Chebyshev (MVUE) UCL		367.5	97.5% Chebyshev (MVUE) UCL					476.9
144				99% Chebyshev (MVUE) UCL		691.8						
145												
146	**Nonparametric Distribution Free UCL Statistics**											
147	**Data appear to follow a Discernible Distribution**											
148												
149	**Nonparametric Distribution Free UCLs**											
150				95% CLT UCL		210.2	95% BCA Bootstrap UCL					256.4

	A	B	C	D	E	F	G	H	I	J	K	L
151	95% Standard Bootstrap UCL					203.7	95% Bootstrap-t UCL					408.7
152	95% Hall's Bootstrap UCL					570.2	95% Percentile Bootstrap UCL					212.1
153	90% Chebyshev(Mean, Sd) UCL					287.8	95% Chebyshev(Mean, Sd) UCL					365.6
154	97.5% Chebyshev(Mean, Sd) UCL					473.6	99% Chebyshev(Mean, Sd) UCL					685.7
155												
156	**Suggested UCL to Use**											
157	95% Student's-t UCL					221						
158												
159	**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**											
160	**Please verify the data were collected from random locations.**											
161	**If the data were collected using judgmental or other non-random methods,**											
162	**then contact a statistician to correctly calculate UCLs.**											
163												
164	When a data set follows an approximate distribution passing only one of the GOF tests,											
165	it is suggested to use a UCL based upon a distribution passing both GOF tests in ProUCL											
166												
167	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
168	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
169	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
170												

APPENDIX J

AGS ENVIRONMENTAL SERVICES P/L
16/25 Gipps St
Collingwood
VIC 3066

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **John Hogan**

Report **1117563-S-V2**
Project name MICTHAM
Project ID AGS240210
Received Date Jul 12, 2024

Client Sample ID			**SB01/0.2**	**SB02/0.2**	**SB03/0.2**	**SB04/0.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M24-JI0033402**	**M24-JI0033403**	**M24-JI0033404**	**M24-JI0033405**
Date Sampled			**Jul 12, 2024**	**Jul 12, 2024**	**Jul 12, 2024**	**Jul 12, 2024**
Test/Reference	LOR	Unit				
Volatile Organics						
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Hexachlorobutadiene	0.5	mg/kg	< 0.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	-
Allyl chloride	0.5	mg/kg	< 0.5	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.5	mg/kg	< 0.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromoform	0.5	mg/kg	< 0.5	-	-	-
Bromomethane	0.5	mg/kg	< 0.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Chloroethane	0.5	mg/kg	< 0.5	-	-	-
Chloroform	0.5	mg/kg	< 0.5	-	-	-
Chloromethane	0.5	mg/kg	< 0.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			SB01/0.2	SB02/0.2	SB03/0.2	SB04/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033402	M24-JI0033403	M24-JI0033404	M24-JI0033405
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Trichloroethene	0.5	mg/kg	< 0.5	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
Total MAH*	0.5	mg/kg		-	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg		-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg		-	-	-
4-Bromofluorobenzene (surr.)	1	%	67	-	-	-
Toluene-d8 (surr.)	1	%	75	-	-	-
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10*	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16*	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34*	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB01/0.2	SB02/0.2	SB03/0.2	SB04/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033402	M24-JI0033403	M24-JI0033404	M24-JI0033405
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	65	121	112	80
p-Terphenyl-d14 (surr.)	1	%	145	119	61	91
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg		-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg		-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg		-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg		-	-	-
Dibutylchlorendate (surr.)	1	%	130	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	107	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-

Client Sample ID			SB01/0.2	SB02/0.2	SB03/0.2	SB04/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033402	M24-JI0033403	M24-JI0033404	M24-JI0033405
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	130	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	107	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg		-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1.0	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	82	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg		-	-	-
Chromium (hexavalent)	1	mg/kg	< 1	-	-	-
Cyanide (total)	5	mg/kg	< 5	-	-	-
Fluoride	100	mg/kg	< 100	-	-	-
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	7.7	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	4.0	6.8	7.6	3.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	51	120	62
Copper	5	mg/kg	15	19	< 5	10.0
Lead	5	mg/kg	22	34	18	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	-	-	-
Nickel	5	mg/kg	6.1	14	9.0	32
Selenium	2	mg/kg	< 2	-	-	-
Silver	2	mg/kg	< 2	-	-	-
Tin	10	mg/kg	< 10	-	-	-
Zinc	5	mg/kg	59	120	6.3	17
Sample Properties						
% Moisture	1	%	14	18	27	19

Client Sample ID			SB01/0.2	SB02/0.2	SB03/0.2	SB04/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033402	M24-JI0033403	M24-JI0033404	M24-JI0033405
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	51	50	73

Client Sample ID			SB05/0.2	SB06/0.2	SB07/0.2	SB08/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033406	M24-JI0033407	M24-JI0033408	M24-JI0033409
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
1.2.4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	-
Allyl chloride	0.5	mg/kg	-	< 0.5	-	-
Benzene	0.1	mg/kg	-	< 0.1	-	-
Bromobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroethane	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			SB05/0.2	SB06/0.2	SB07/0.2	SB08/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033406	M24-JI0033407	M24-JI0033408	M24-JI0033409
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	-
Total MAH*	0.5	mg/kg	-		-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-		-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-		-	-
4-Bromofluorobenzene (surr.)	1	%	-	50	-	-
Toluene-d8 (surr.)	1	%	-	110	-	-
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	60	< 50	< 50
TRH C6-C10*	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16*	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34*	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB05/0.2	SB06/0.2	SB07/0.2	SB08/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033406	M24-JI0033407	M24-JI0033408	M24-JI0033409
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	78	76	83	83
p-Terphenyl-d14 (surr.)	1	%	87	84	88	85
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-HCH	0.05	mg/kg	-	< 0.05	-	-
d-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-		-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-		-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-		-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-		-	-
Dibutylchlorendate (surr.)	1	%	-	70	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	91	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.2	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.2	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.2	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.2	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.2	-	-

Client Sample ID			SB05/0.2	SB06/0.2	SB07/0.2	SB08/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033406	M24-JI0033407	M24-JI0033408	M24-JI0033409
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1254	0.1	mg/kg	-	< 0.2	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.2	-	-
Total PCB*	0.1	mg/kg	-	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	-	70	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	91	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-		-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1.0	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
Total cresols*	0.5	mg/kg	-	< 0.5	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	97	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-		-	-
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Fluoride	100	mg/kg	-	< 100	-	-
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	-	7.2	-	-
Heavy Metals						
Arsenic	2	mg/kg	4.6	2.5	27	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	68	29	40	8.1
Copper	5	mg/kg	< 5	11	10	15
Lead	5	mg/kg	12	9.7	21	28
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	-	-
Nickel	5	mg/kg	8.8	23	7.1	< 5
Selenium	2	mg/kg	-	< 2	-	-
Silver	2	mg/kg	-	< 2	-	-
Tin	10	mg/kg	-	< 10	-	-
Zinc	5	mg/kg	6.3	18	24	120
Sample Properties						
% Moisture	1	%	20	17	18	19

Client Sample ID			SB05/0.2	SB06/0.2	SB07/0.2	SB08/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M24-JI0033406	M24-JI0033407	M24-JI0033408	M24-JI0033409
Date Sampled			Jul 12, 2024	Jul 12, 2024	Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	71	-	77	90

Client Sample ID			SB09/0.2	SB10/0.2
Sample Matrix			Soil	Soil
Eurofins Sample No.			M24-JI0033410	M24-JI0033411
Date Sampled			Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
TRH C6-C10*	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16*	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34*	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			SB09/0.2	SB10/0.2
Sample Matrix			Soil	Soil
Eurofins Sample No.			M24-JI0033410	M24-JI0033411
Date Sampled			Jul 12, 2024	Jul 12, 2024
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	72	91
p-Terphenyl-d14 (surr.)	1	%	92	104
Heavy Metals				
Arsenic	2	mg/kg	3.1	3.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	11	10
Copper	5	mg/kg	45	18
Lead	5	mg/kg	50	32
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	7.3	< 5
Zinc	5	mg/kg	600	190
Sample Properties				
% Moisture	1	%	34	18
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	88

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Vic EPA 1828.2 Table 3 (Solids)			
Volatile Organics	Melbourne	Jul 23, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Total Recoverable Hydrocarbons	Melbourne	Jul 15, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 15, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 15, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 15, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jul 15, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jul 23, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Jul 23, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Phenols (Halogenated)	Melbourne	Jul 23, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Jul 23, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Chromium (hexavalent)	Melbourne	Jul 23, 2024	28 Days
- Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection			
Cyanide (total)	Melbourne	Jul 23, 2024	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Fluoride	Melbourne	Jul 23, 2024	28 Days
- Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE			
pH (1:5 Aqueous extract at 25 °C as rec.)	Melbourne	Jul 19, 2024	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Metals IWRG 621 : Metals M12	Melbourne	Jul 23, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B7			
Metals M8	Melbourne	Jul 23, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
BTEX	Melbourne	Jul 23, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
% Moisture	Melbourne	Jul 12, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Company Name: AGS ENVIRONMENTAL SERVICES P/L
Address: 16/25 Gipps St
Collingwood
VIC 3066

Project Name: MICTHAM
Project ID: AGS240210

Order No.:
Report #: 1117563
Phone: 8528 1480
Fax:

Received: Jul 12, 2024 2:47 PM
Due: Jul 19, 2024
Priority: 5 Day
Contact Name: John Hogan

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD*	Moisture Set	Eurofins Suite B7	Vic EPA 1828.2 Table 3 (Solids)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	SB01/0.2	Jul 12, 2024		Soil	M24-Jl0033402		X	X	
2	SB02/0.2	Jul 12, 2024		Soil	M24-Jl0033403		X	X	
3	SB03/0.2	Jul 12, 2024		Soil	M24-Jl0033404		X		X
4	SB04/0.2	Jul 12, 2024		Soil	M24-Jl0033405		X	X	
5	SB05/0.2	Jul 12, 2024		Soil	M24-Jl0033406		X	X	
6	SB06/0.2	Jul 12, 2024		Soil	M24-Jl0033407		X	X	
7	SB07/0.2	Jul 12, 2024		Soil	M24-Jl0033408		X	X	
8	SB08/0.2	Jul 12, 2024		Soil	M24-Jl0033409		X	X	
9	SB09/0.2	Jul 12, 2024		Soil	M24-Jl0033410		X	X	
10	SB10/0.2	Jul 12, 2024		Soil	M24-Jl0033411		X	X	
11	SB01/0.5	Jul 12, 2024		Soil	M24-Jl0033412	X			
12	SB02/0.6	Jul 12, 2024		Soil	M24-Jl0033413	X			
13	SB03/0.6	Jul 12, 2024		Soil	M24-Jl0033414	X			
14	SB04/0.6	Jul 12, 2024		Soil	M24-Jl0033415	X			

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
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Contact Name: John Hogan

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD*	Moisture Set	Eurofins Suite B7	Vic EPA 1828.2 Table 3 (Solids)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
15	SB05/0.6	Jul 12, 2024		Soil	M24-Jl0033416	X			
16	SB06/0.6	Jul 12, 2024		Soil	M24-Jl0033417	X			
17	SB07/0.6	Jul 12, 2024		Soil	M24-Jl0033418	X			
18	SB08/0.6	Jul 12, 2024		Soil	M24-Jl0033419	X			
19	SB09/0.6	Jul 12, 2024		Soil	M24-Jl0033420	X			
20	SB10/0.6	Jul 12, 2024		Soil	M24-Jl0033421	X			
Test Counts						10	10	9	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Fluoride	mg/kg	< 100			100	Pass	
Method Blank							
Cyanide (total)	mg/kg	< 5			5	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C6-C10*	mg/kg	< 20			20	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH >C10-C16*	mg/kg	< 50			50	Pass	
TRH >C16-C34*	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Volatile Organics							
Benzene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C6-C10*	mg/kg	< 20			20	Pass	
Method Blank							
Volatile Organics							
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C6-C10*	mg/kg	< 20			20	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C10-C14	%	84			70-130	Pass	
TRH >C10-C16*	%	83			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	84			70-130	Pass	
Acenaphthylene	%	78			70-130	Pass	
Anthracene	%	92			70-130	Pass	
Benz(a)anthracene	%	119			70-130	Pass	
Benzo(a)pyrene	%	106			70-130	Pass	
Benzo(b&j)fluoranthene	%	81			70-130	Pass	
Benzo(g.h.i)perylene	%	90			70-130	Pass	
Benzo(k)fluoranthene	%	124			70-130	Pass	
Chrysene	%	88			70-130	Pass	
Dibenz(a.h)anthracene	%	86			70-130	Pass	
Fluoranthene	%	99			70-130	Pass	
Fluorene	%	123			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	101			70-130	Pass	
Naphthalene	%	77			70-130	Pass	
Phenanthrene	%	119			70-130	Pass	
Pyrene	%	113			70-130	Pass	
LCS - % Recovery							
Fluoride	%	93			70-130	Pass	
LCS - % Recovery							
Cyanide (total)	%	87			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	107			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	112			80-120	Pass	
Lead	%	108			80-120	Pass	
Mercury	%	101			80-120	Pass	
Molybdenum	%	104			80-120	Pass	
Nickel	%	108			80-120	Pass	
Selenium	%	103			80-120	Pass	
Silver	%	106			80-120	Pass	
Tin	%	102			80-120	Pass	
Zinc	%	105			80-120	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	90			70-130	Pass	
1.2-Dichlorobenzene	%	106			70-130	Pass	
1.2-Dichloroethane	%	96			70-130	Pass	
Benzene	%	108			70-130	Pass	
Ethylbenzene	%	122			70-130	Pass	
m&p-Xylenes	%	120			70-130	Pass	
Toluene	%	107			70-130	Pass	
Trichloroethene	%	104			70-130	Pass	
Xylenes - Total*	%	121			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	113			70-130	Pass	
TRH C6-C10*	%	104			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	79			70-130	Pass	
1.2-Dichlorobenzene	%	76			70-130	Pass	
1.2-Dichloroethane	%	98			70-130	Pass	
Benzene	%	77			70-130	Pass	
Ethylbenzene	%	83			70-130	Pass	
m&p-Xylenes	%	81			70-130	Pass	
Toluene	%	90			70-130	Pass	
Trichloroethene	%	108			70-130	Pass	
Xylenes - Total*	%	85			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	108			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	89			70-130	Pass	
TRH C6-C10*	%	91			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	87			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M24-JI0033969	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M24-JI0033969	NCP	%	117			70-130	Pass	
TRH C10-C14	M24-JI0033571	NCP	%	78			70-130	Pass	
TRH C6-C10*	M24-JI0033969	NCP	%	119			70-130	Pass	
TRH >C10-C16*	M24-JI0033571	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M24-JI0022412	NCP	%	81			70-130	Pass	
Acenaphthylene	M24-JI0022412	NCP	%	75			70-130	Pass	
Anthracene	M24-JI0022412	NCP	%	102			70-130	Pass	
Benz(a)anthracene	M24-JI0022412	NCP	%	104			70-130	Pass	
Benzo(a)pyrene	M24-JI0022412	NCP	%	117			70-130	Pass	
Benzo(b&j)fluoranthene	M24-JI0022412	NCP	%	111			70-130	Pass	
Benzo(g.h.i)perylene	M24-JI0022412	NCP	%	106			70-130	Pass	
Benzo(k)fluoranthene	M24-JI0022412	NCP	%	108			70-130	Pass	
Chrysene	M24-JI0022412	NCP	%	86			70-130	Pass	
Dibenz(a.h)anthracene	M24-JI0022412	NCP	%	108			70-130	Pass	
Fluoranthene	M24-JI0022412	NCP	%	94			70-130	Pass	
Fluorene	M24-JI0022412	NCP	%	111			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M24-JI0022412	NCP	%	94			70-130	Pass	
Naphthalene	M24-JI0022412	NCP	%	111			70-130	Pass	
Phenanthrene	M24-JI0022412	NCP	%	116			70-130	Pass	
Pyrene	M24-JI0022412	NCP	%	106			70-130	Pass	
Spike - % Recovery									
				Result 1					
Fluoride	M24-JI0033402	CP	%	90			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	M24-JI0033406	CP	%	86			70-130	Pass	
Ethylbenzene	M24-JI0033406	CP	%	98			70-130	Pass	
m&p-Xylenes	M24-JI0033406	CP	%	102			70-130	Pass	
o-Xylene	M24-JI0033406	CP	%	98			70-130	Pass	
Toluene	M24-JI0033406	CP	%	91			70-130	Pass	
Xylenes - Total*	M24-JI0033406	CP	%	101			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M24-JI0033406	CP	%	107			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M24-JI0033406	CP	%	87			70-130	Pass	
TRH C6-C10*	M24-JI0033406	CP	%	87			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M24-JI0033408	CP	%	81			75-125	Pass	
Cadmium	M24-JI0033408	CP	%	109			75-125	Pass	
Copper	M24-JI0033408	CP	%	81			75-125	Pass	
Lead	M24-JI0033408	CP	%	77			75-125	Pass	
Mercury	M24-JI0033408	CP	%	100			75-125	Pass	
Molybdenum	M24-JI0033408	CP	%	83			75-125	Pass	
Nickel	M24-JI0033408	CP	%	88			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Selenium	M24-JI0033408	CP	%	78			75-125	Pass	
Silver	M24-JI0033408	CP	%	108			75-125	Pass	
Tin	M24-JI0033408	CP	%	86			75-125	Pass	
Zinc	M24-JI0033408	CP	%	87			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M24-JI0033564	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M24-JI0033564	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M24-JI0033402	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M24-JI0033402	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M24-JI0033402	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10*	M24-JI0033564	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16*	M24-JI0033402	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34*	M24-JI0033402	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M24-JI0033402	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Heptachlor	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M24-JI0033402	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M24-JI0033402	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M24-JI0033402	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M24-JI0033402	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M24-JI0033402	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M24-JI0033402	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M24-JI0033402	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M24-JI0033402	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M24-JI0033402	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M24-JI0033402	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M24-JI0033402	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M24-JI0033402	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M24-JI0033402	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M24-JI0033402	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M24-JI0033402	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M24-JI0033402	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M24-JI0033408	CP	mg/kg	27	27	<1	30%	Pass	
Cadmium	M24-JI0033408	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M24-JI0033408	CP	mg/kg	40	40	<1	30%	Pass	
Copper	M24-JI0033408	CP	mg/kg	10	10	<1	30%	Pass	
Lead	M24-JI0033408	CP	mg/kg	21	21	<1	30%	Pass	
Mercury	M24-JI0033408	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M24-JI0033408	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M24-JI0033408	CP	mg/kg	7.1	7.1	<1	30%	Pass	
Selenium	M24-JI0033408	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M24-JI0033408	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tin	M24-JI0033408	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M24-JI0033408	CP	mg/kg	24	24	1.2	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	M24-JI0033408	CP	%	18	18	2.3	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M24-Jl0033409	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	M24-Jl0033410	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M24-Jl0033410	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M24-Jl0033410	CP	mg/kg	< 50	< 50	<1	30%	Pass	Q15
TRH >C10-C16*	M24-Jl0033410	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34*	M24-Jl0033410	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M24-Jl0033410	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M24-Jl0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M24-Jl0033410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M24-Jl0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M24-JI0033410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M24-JI0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M24-JI0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M24-JI0033410	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M24-JI0033410	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M24-JI0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M24-JI0033410	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M24-JI0033410	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M24-JI0033410	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M24-JI0033410	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M24-JI0033410	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M24-JI0033410	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M24-JI0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M24-JI0033410	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M24-JI0033410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M24-JI0033410	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M24-JI0033410	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M24-JI0033410	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M24-JI0033410	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

V2: Report amended to reflect the corrected analysis requested by AR and to include the repeat zinc results for sample JI0033410.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Savini Suduweli	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Volatile
Edward Lee	Senior Analyst-Organic
Emily Rosenberg	Senior Analyst-Metal
Harry Bacalis	Senior Analyst-Volatile
Joseph Edouard	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-Volatile
Mary Makarios	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal
Mary Makarios	Senior Analyst-Sample Properties

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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APPENDIX K

AGS ENVIRONMENTAL SERVICES
Suite 16/25 Gipps Street
Collingwood VIC 3066
(03)8528 1480
info@agses.com.au

Knowles Group Pty Ltd

Project #: AGS240210
724-728 Whitehorse Road, Mitcham

DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : North West Corner

SOIL BORE SB01

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								FILL: SANDY SILTY matrix, dark grey, with fine rounded white gravels. No odour, no staining.
0.2					0.0	☒	SB01/0.2	
0.4								NATURAL: SILTY CLAY, brown to tan with orange mottling, increasing density with depth. No odour, no staining.
0.6					0.1	☒	SB01/0.5	
0.8								Soil Bore Terminated at 0.7 m bgl in Natural Soils.

AGS ENVIRONMENTAL SERVICES
Suite 16/25 Gipps Street
Collingwood VIC 3066
(03)8528 1480
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Knowles Group Pty Ltd

Project #: AGS240210
724-728 Whitehorse Road, Mitcham

DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : North Boundary

SOIL BORE SB02

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								FILL: CRUSHED ROCK, angular, dark grey scoria
0.2					0.0	☒	SB02/0.2	FILL: CLAYEY SILT, dark grey, with minor gravels, and crushed rock, loose. No odours, no staining.
0.4								
0.6					0.1	☒	SB02/0.6	NATURAL: SILTY CLAY, tan brown with orange mottling, increasing density with depth. No odour, no staining.
0.8								
1.0								Soil Bore Terminated at 0.9 m bgl in Natural Soils.

AGS ENVIRONMENTAL SERVICES
Suite 16/25 Gipps Street
Collingwood VIC 3066
(03)8528 1480
info@agses.com.au

Knowles Group Pty Ltd

Project #: AGS240210
724-728 Whitehorse Road, Mitcham

DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : North eastern portion

SOIL BORE SB03

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								Asphalt
								FILL: CRUSHED ROCK, angular, dark grey scoria
0.2					0.0	☒	SB03/0.2	FILL: CLAYEY SILT, intermixed with large, grey, gravels, dense, compacted orange clays, with some red mottling. No odours, no staining.
0.4								NATURAL: SILTY CLAY, orange, moist, high density. No odour, no staining.
0.6					0.1	☒	SB03/0.6	
0.8								Soil Bore Terminated at 0.7 m bgl in Natural Soils.

AGS ENVIRONMENTAL SERVICES
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Knowles Group Pty Ltd

Project #: AGS240210
724-728 Whitehorse Road, Mitcham

DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : Central eastern portion

SOIL BORE SB04

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								Asphalt
								FILL: CRUSHED ROCK, angular, dark grey scoria
								FILL: CLAYEY SILT, intermixed with large, grey, gravels, dense, compacted orange clays, with some red mottling. No odours, no staining.
0.2					0.0	☒	SB04/0.2	
								NATURAL: SILTY CLAY, orange, moist, high density. No odour, no staining.
0.4								
0.6					0.1	☒	SB04/0.6	
								Soil Bore Terminated at 0.7 m bgl in Natural Soils.
0.8								

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DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : Central eastern portion

SOIL BORE SB05

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								Asphalt
								FILL: CRUSHED ROCK, angular, dark grey scoria
								FILL: CLAYEY SILT, intermixed with large, grey, gravels, dense, compacted orange clays. No odours, no staining.
0.2					0.0	☒	SB05/0.2	
								NATURAL: SILTY CLAY, orange, dry, high density. No odour, no staining.
0.4								
0.6					0.1	☒	SB05/0.6	
								Soil Bore Terminated at 0.7 m bgl in Natural Soils.
0.8								

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DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : Central southeastern portion

SOIL BORE SB06

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								Asphalt
								FILL: CRUSHED ROCK, angular, dark grey scoria
0.2					0.0	☒	SB06/0.2	FILL: CLAYEY SILT, intermixed with large, grey, gravels, dense, compacted orange clays. No odours, no staining.
0.4								NATURAL: SILTY CLAY, grey orange, some black organic matter, moist-dry, high density. Slight inorganic odour, no staining.
0.6					0.1	☒	SB06/0.6	
								Soil Bore Terminated at 0.7 m bgl in Natural Soils.
0.8								

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DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : Central southern portion

SOIL BORE SB07

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								Concrete
0.2					0.0	☒	SB07/0.2	FILL: CRUSHED ROCK, large angular gravels, intermixed with grey wet clays
0.4								NATURAL: SILTY CLAY, grey, high density. Slight inorganic odour, no staining.
0.6					0.1	☒	SB07/0.6	
0.8								Soil Bore Terminated at 0.7 m bgl in Natural Soils.

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DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : North western boundary

SOIL BORE SB08

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								FILL: SANDY CLAY, garden bed matrix, intermixed with vegetation and organic matter. No odour, no staining
0.2					0.0	☒	SB08/0.2	
0.4								NATURAL: SILTY CLAY, grey, some orange mottling, high density. No odour, no staining.
0.6					0.1	☒	SB08/0.6	
								Soil Bore Terminated at 0.7 m bgl in Natural Soils.
0.8								

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724-728 Whitehorse Road, Mitcham

DATE STARTED : 12/07/2024
DATE COMPLETED : 12/07/2024
DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : Central western boundary

SOIL BORE SB09

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								FILL: SANDY CLAY, garden bed matrix, intermixed with vegetation and organic matter. No odour, no staining
0.2					0.0	☒	SB09/0.2	
0.4								NATURAL: SILTY CLAY, grey, some orange mottling, high density. No odour, no staining.
0.6					0.1	☒	SB09/0.6	
								Soil Bore Terminated at 0.7 m bgl in Natural Soils.
0.8								

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DRILLING CONTRACTOR :
EQUIPMENT : Hand Auger
HOLE SIZE :
R.I. TOP OF CASING :
DATUM :
EASTING :
NORTHING :
HOLE LOCATION : Southern western boundary

SOIL BORE SB10

LOGGED BY : AR
CHECKED BY : JH
NOTES : AR

Depth (m)	Method	Water Level	GRAPHIC	USCS	PID	Sample	Sample Name	Material Description
0.0								FILL: SANDY CLAY, garden bed matrix, intermixed with vegetation and organic matter. No odour, no staining
0.2					0.0	☒	SB10/0.2	
0.4								NATURAL: SILTY CLAY, grey, some orange mottling, high density. No odour, no staining.
0.6					0.1	☒	SB10/0.6	
								Soil Bore Terminated at 0.7 m bgl in Natural Soils.
0.8								

APPENDIX G: CATHODIC PROTECTION SEARCH

CATHODIC PROTECTION SYSTEM DATABASE SEARCH

Primary Search criteria: Address contains "724-728 whitehorse road mitcham"
Secondary Search criteria: None

CPS Reg Number	Address	Suburb	Structure Protected	Owner	Approved current output	Status	Type of system

No record found

Disclaimer

Energy Safe Victoria provides Cathodic Protection system information in good faith, but cannot guarantee the completeness or accuracy of or validate the information provided. The Cathodic Protection (CP) database is a register of currently operating Cathodic Protection systems in Victoria and was established in 1970. The CP database is administered under the Electricity Safety Act 1998 and the Electricity Safety (Cathodic Protection) Regulations 2019. Some underground fuel tanks may not be listed in the CP database including: if the tank is not metallic (therefore not requiring CP); the tank is metallic but CP was not installed; the CP system was not registered, the CP was installed after 26 November 2019 after which galvanic anodes under 250mA were no longer required to be registered; or the CP system has been de-commissioned. If you believe underground tanks may be present and not shown on ESV's CP database you should conduct your own tests and investigations. ESV accepts no responsibility or liability for or arising from your use of, or reliance on, information obtained from the CPS database.

**** If a drawing of the CPS system is required, please contact the CPS Owner**

Energy Safe Victoria
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APPENDIX H: SITE PHOTOS

Photo 1 Main building wing

Photo 2 View of the asphalt courtyard

Photo 3 Garden area with healthy vegetation

Photo 4 Looking back towards the main wing and outdoor shed

Photo 5 Looking along the Wills Street Boundary

Photo 6 View back along the main wing

Photo 7 View looking north along the main wing

Photo 8 Main asphalt courtyard

Photo 9 View of the back corner showing the shed staorage area

Photo 10 Area showing healthy vegetation