ENVIRONMENTAL AUDIT REPORT

PORTION OF 91-125 CORIYULE ROAD CURLEWIS, VICTORIA

ENVIRONMENTAL AUDIT ID: EA001358

SOHO LIVING AUSTRALIA PTY LTD

21 JULY 2023

AAA Environmental

Report Title:
Environmental Audit Report
Portion of 91-125 Coriyule Road, Curlewis, Victoria
Environmental Audit Id: EA001358
Soho Living Australia Pty Ltd
21 July 2023

Author:
AAA Environmental Pty Ltd
8/153 La Trobe Street
Melbourne 3000

Cover image: Google Earth 2023

Document Distribution

Rev	Copies	Recipient	Date
0	1 x Electronic PDF Report	EPA - Manager Environmental Audit City of Greater Geelong – Principal Planner Soho Living Australia Pty Ltd – Alex Gibson	21 July 2023

Document Authorisation

Authorised by:

Environmental Auditor
(appointed pursuant to the Environment Protection Act 2017)

Environmental audit statement

Under Part 8.3 of the *Environment Protection Act 2017*

Publication F1032 published September 2021

The purpose of an environmental audit is:

a) 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; and
b) to recommend measures to manage the risk of harm to human health or the environment from contaminated land, waste, pollution or any activity; and
c) to make recommendations to manage the contaminated land, waste, pollution or activity.

This statement is a summary of the findings of an environmental audit conducted under Part 8.3 of the *Environment Protection Act 2017* for:

Portion of 91-125 Coriyule Road, Curlewis
Portion of Lot 1 on Title Plan 198964M, Volume 10978 Folio 324

Further details are provided in the environmental audit report that accompanies this statement.

Section 1: Environmental audit overview

Environmental audit ID number:	EA001358

Environmental auditor details

Name:	[redacted]
Company:	AAA Environmental Pty Ltd
Address:	8 / 153 La Trobe Street, Melbourne, 3000
Phone:	[redacted]
Email:	[redacted]

Site owner or occupant

Name:	Alex Gibson
Company:	Curlewis Bellarine Pty Ltd

Environmental auditor engaged by

Name:	[redacted]
Company:	Soho Living Australia Pty Ltd
Relationship to site owner:	Development Manager

Environmental audit statement

Reason for the environmental audit

☒ Requirement under the *Planning and Environment Act 1987* (e.g. planning permit)
☐ Requirement under the *Environment Protection Act 2017* (e.g. remedial notice or licence)
☐ Requirement under other legislation
☐ Other

Section 2: Environmental audit scope

Details of the site in respect of which the environmental audit was conducted

Site/premises name:	None
Address:	Portion of 91-125 Coriyule Road, Curlewis
Title details:	Portion of Lot 1 on Title Plan 198964M Volume 10978 Folio 324
Area (hectares):	16.0 (approximately)

☒ a plan of the site is attached

Use or proposed use for which the site is being audited

Sensitive land use categories

Note that sensitive land uses in the *Environment Reference Standard (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, the *Ministerial Direction No.1 (MD No.1)* considers secondary schools and children's playgrounds to be sensitive land uses.

☐ 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 land use categories

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

Elements of the environment assessed in the environmental audit

☐ Ambient air
  ☐ all environmental values were considered
  ☐ all environmental values other than the following were considered:

☐ Ambient sound
  ☐ all environmental values were considered
  ☐ all environmental values other than the following were considered:

Environmental audit statement

☒ Land

- ☒ all environmental values that apply to the land use category were considered
- ☐ 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 and reference documents considered

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

- EPA Victoria (2022). Guidelines for Conducting Environmental Audits. Publication 2041. February 2022.
- EPA Victoria (2022). Environmental Auditor Guidelines for Appointment and Conduct. EPA Publication 865.13. March 2022
- 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 (2021). Guidance for the Cleanup and Management of Contaminated Groundwater. EPA Publication 2001. July 2021.

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.

Policies

- EPA Victoria (2021). Contaminated Land Policy. Publication 1915. February 2021.

EPA Victoria Publications

- EPA Victoria (2022). Hydrogeological Assessment (Groundwater Quality) Guidelines. EPA Publication 668.1. October 2022.
- EPA Victoria (2022). Groundwater Sampling Guidelines. EPA Publication 669.1. February 2022.
- EPA Victoria (2021). Proposed Guideline. Notifiable Contamination Guideline – Duty to Notify of Contaminated Land. EPA Publication 2008.1. July 2021.
- EPA Victoria (2021). Assessing and Controlling Contaminated Land Risks: A Guide to Meeting the Duty to Manage for those in Management or Control of Land. EPA Publication 1977. June 2021.
- EPA Victoria (2021). Guide to the Environment Reference Standard. EPA Publication 1992. June 2021.
- EPA Victoria (2021). Using SEPPs and WMPs in the New Environment Protection Framework. EPA Publication 1994. June 2021.
- EPA Victoria (2021). Contaminated Land: Understanding Section 35 of the Environment Protection Act 2017. EPA Publication 1940. February 2021.
- EPA Victoria (2021). Proposed Methodology for Deriving Background Level Concentration when Assessing Potentially Contaminated Land. EPA Publication 1936. January 2021.

- EPA Victoria (2018). Closed Landfill Guidelines. EPA Publication 1490.1. January 2018.
- EPA Victoria (2018). Landfill Gas Fugitive Emissions Monitoring Guideline. EPA Publication 1684. February 2018.
- EPA Victoria (2017). Assessing Planning Proposals Within the Buffer. EPA Publication 1642. October 2017.
- EPA Victoria (2016). Landfill Licensing. EPA Publication 1323.3. September 2016.
- EPA Victoria (2009). Industrial Waste Resource Guidelines. Arsenic in Mine Tailings, Sand and Rock. EPA Publication IWRG431. June 2009.

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.
- CRC Care National Remediation Framework Website. (https://www.crccare.com/knowledge-sharing/national-remediation-framework).
- Canadian Council of Ministers of the Environment (2007). Canadian Environmental Quality Guidelines (www.ccme.ca/en/resources/canadian_environmental_quality_guidelines/index.html).
- Dutch National Institute of Public Health and the Environment, RIVM (2013). Soil Remediation Circular, Version of 1 July 2013.
- 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.
- Victorian Government Department of Sustainability and Environment (2010). Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soils. October 2010.

Assumptions made during the environmental audit or any limitations

None

Exclusions from the environmental audit and the rationale for these

- Ambient air was not considered to be relevant in this setting because no potential risks to air quality were identified emanating from the site or from the adjacent sites at the time of the site investigations or the site inspection.
- No natural surface water bodies occur within the site therefore this element was not relevant.
- Ambient sound was not considered to be relevant in this setting because no potential risks to sound quality were identified emanating from the site or from the adjacent sites at the time of the site investigations or the site inspection.

This statement is accompanied by the following environmental audit report:

Title:	Environmental Audit Report Portion of 91-125 Coriyule Road Curlewis, Victoria
Report no:	20228
Date:	21 July 2023

Section 3: Results and recommendations of the environmental audit

Land use suitability

Based on my assessment of the site in relation to the risk of harm to human health or the environment from contaminated land, waste or pollution, I am of the opinion that the site is **suitable for the following land uses**:

Sensitive land use categories

☒ 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 land use categories

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

Results of the environmental audit

Based on my assessment of the risk of harm to human health or the environment from contaminated land/waste/pollution for the site located at **Portion of 91-125 Coriyule Road, Curlewis, Victoria**, I conclude that :

- Concentrations of contaminants in soils did not exceed the auditor's adopted ecological or human health screening levels at the site, therefore the environmental values Land dependent ecosystems and species (modified and highly modified), Human health, Buildings and structures, Aesthetics and Protection of food, flora and fibre have been achieved and maintained at the site and therefore are protected.

- An intrusive groundwater was not undertaken at the site due to the low potential for site derived contamination of groundwater to have occurred. Based on the review of historical activity in the surrounding area and the hydrogeological conditions expected at the site, the Auditor considered that groundwater beneath the site is unlikely to have been contaminated by onsite or offsite activities.

Recommendations

None

Other related information

1. Not all land uses for which the audit site is considered suitable by this environmental audit may be allowed under the existing zoning of the City of Greater Geelong planning scheme.
2. Any soil proposed to be excavated and disposed off-site after the completion of the audit, must be classified by an appropriately qualified professional in accordance with the Environment Protection Regulations 2021 and EPA guidelines.

3.	All fill material proposed to be imported to the audit site after the completion of the environmental audit, must be tested and classified as 'Fill Material" in accordance with Environment Protection Regulations 2021 and any relevant EPA designations and guidance.
4.	In accordance with Section 214 of the Environment Protection Act 2017, the person in management or control of the site must provide a copy of this environmental audit statement to any person who proposes to become the person in management or control of the site.
5.	Specialist advice should be sought in determining the geotechnical suitability of any material for its intended purpose.

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 information contained in this statement represents a true and accurate summary of the findings of the environmental audit that I have completed.

Date: 21 July 2023

Signed: [redacted]

Name: [redacted]
Environmental Auditor

Attachment 1
Certificate of Title / Surveyed Site Plan

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

VOLUME 10978 FOLIO 324

Security no : 124075729850Y
Produced 16/01/2019 11:50 AM

LAND DESCRIPTION

Lot 1 on Title Plan 198964M.
PARENT TITLE Volume 09105 Folio 585
Created by instrument AE734204J 17/11/2006

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
CURLEWIS BELLARINE PTY LTD of UNIT 11 41 SABRE DRIVE PORT MELBOURNE VIC 3207
AQ666908S 25/01/2018

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 TP198964M 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: 91-125 CORIYULE ROAD CURLEWIS VIC 3222

DOCUMENT END

TITLE PLAN		EDITION 1	TP 198964M

Location of Land

Parish: BELLARINE
Township:
Section:
Crown Allotment:
Crown Portion: 3(PT)

Last Plan Reference: LP10309
Derived From: VOL 9105 FOL 585
Depth Limitation: NIL

Notations

ANY REFERENCE TO MAP IN THE TEXT MEANS THE DIAGRAM SHOWN ON THIS TITLE PLAN

Description of Land / Easement Information

ALL THAT piece of land delineated and coloured red on the map hereon being ~~part of~~ Lot 15 on Plan of Subdivision No.10309 and being part of Crown Portion 3 Parish of Bellarine County of Grant Together with a right of carriage way over Coryule Road coloured brown on the said Plan of Subdivision

THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT
COMPILED: 23/11/2000
VERIFIED: SO'C

COLOUR CODE
R = RED

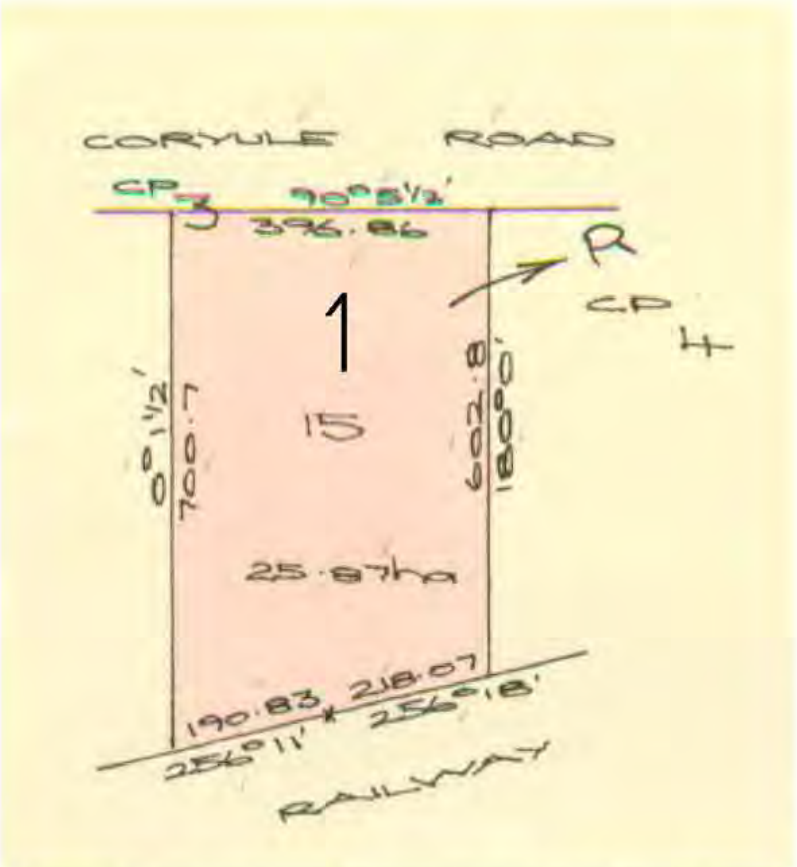

TABLE OF PARCEL IDENTIFIERS
WARNING: Where multiple parcels are referred to or shown on this Title Plan this does not imply separately disposable parcels under Section 8A of the Sale of Land Act 1962
PARCEL 1 = LOT 15 ON LP10309

LENGTHS ARE IN METRES	Metres = 0.3048 x Feet Metres = 0.201168 x Links		Sheet 1 of 1 sheets

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 29/08/22 5:08:35 PM; Document Path: J:\EHSS_GIS\AUSC03860_JettyRoadStage2\01_ANALYSIS\PRSA-Figure1_2.mxd

PRSA Statement Area

0 30 60 120 180 240 Meters
1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

EHS Support

Figure 1-2

CREATED BY:	[redacted]
APPROVED BY:	
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:4,000
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

N

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Executive Summary

The Auditor was engaged to undertake an Environmental Audit in accordance with Division 3 of Part 8.3 of the Environment Protection Act 2017 of the property identified as a portion of 91-125 Coriyule Road, Curlewis, Victoria. The Environmental Audit was required to address the outcome of a Preliminary Risk Screen Assessment (PRSA) completed for the site by Stephen Cambridge of EHS Support (dated 19 September 2022) which indicated that a defined area of the site (as presented in Figure 1 of this Audit Report) required an Environmental Audit due to the presence of concentrations of organochlorine pesticides (including dieldrin) in surface soils exceeding the adopted criterion for human consumption of poultry and eggs. The area included in Figure 1 is the subject of this Environmental Audit.

The site is proposed to be developed for low density to medium density residential and recreational purposes. On that basis, the most sensitive land use has been assessed to be consistent with the land use designated as *Sensitive use - other (lower density)* in the Environment Reference Standard (May 2021) (ERS).

The Preliminary Site Investigation (PSI) and the Detailed Site Investigation (DSI) works were conducted by Environmental Site Assessments Pty Ltd.

Preliminary Site Investigation

Based on the site history findings, there was potential for site originated contamination associated with site uses including:

- Importation and use of fill from unknown origin and / or reuse of site / offsite derived fill – contaminants may include metals, Total Recoverable Hydrocarbons (TRH), Polycyclic Aromatic Hydrocarbons (PAH), and possibly asbestos containing materials (ACM).
- Agricultural uses – metals, organochlorine pesticides (OCP), organophosphorus pesticides (OPP) and herbicides.

Potential offsite sources of contamination were also identified as follows:

- Agricultural uses – metals, OCP, OPP and herbicides.

The Auditor is satisfied that the data collected as part of the site history review was sufficient to characterise potential contamination sources and the associated contaminants of concern in each media type relevant to the assessment of the environmental condition of the site for the Audit.

Detailed Site Investigation

The DSI works included the following:

- Collection of soil samples from 150 grid sampling locations (SB01 to SB150) to depths between 0 and of 0.3 m bgl across the site in September 2022.
- Collection of soil samples at depths between 0.3 and 1.05 m bgl to delineate the vertical extent of dieldrin contamination at sampling locations SB03, SB43, SB44, SB45, SB64, SB88, SB118, SB137 and SB143 in December 2022.
- Collection of soil samples at sampling locations SB04, SB22, SB35, SB53, SB69, SB74, SB100, SB117, SB121 and SB144 at depths between 0 and 0.15 m bgl to determine the potential for herbicides to be present in former cropping areas.

- Collection of soil samples at depths between 0.0 and 0.45 m bgl from 50 grid sampling locations (SB151 to SB200) within the Cultural Heritage Management Area located within the north western portion of the site.
- Collection of delineation samples (SB201 to SB270) at depths between 0 and 0.3 m bgl in the vicinity of original grid sampling locations SB03, SB43, SB44, SB45, SB46, SB64, SB88, SB118, SB137, SB142, SB143 and SB150).
- Collection of further delineation samples (SB271 to SB278) at depths between 0 and 0.3 m in the vicinity of sampling locations SB252, SB253, SB254 and SB255.
- All analytical data were compared to relevant screening level criteria and exceedances of the criteria were further considered and assessed.

The Auditor is satisfied that the data collected as part of the DSI was sufficient to characterise contamination associated with each media type relevant to the assessment of the environmental condition of the site for the Audit.

The Auditor is also satisfied that the data collected as part of the DSI is adequately reliable and accurate for the purposes of the Audit.

Land Assessment

Site investigations indicated that dieldrin impacted soils were identified at several locations across the site. Soil remediation works were completed at the identified locations and the validation samples indicated that remaining soils reported dieldrin concentrations below the adopted screening values.

Following the completion of remediation works, no contaminants exceeding the adopted screening criteria for ecological health (NEPM EIL/NEPM ESL) or human health (NEPM HIL A / HSL A&B) were reported in the fill or natural soils collected across the site.

The Auditor concluded that slightly elevated concentrations of beryllium (one location), cobalt (three locations), manganese (two locations) and vanadium (three locations) were considered to be statistically insignificant and therefore on this basis were considered unlikely to pose a risk of harm to ecological or human receptors.

On this basis, the Auditor concluded that there is no risk of harm to the following environmental values:

- Land dependent ecosystems and species (modified and highly modified);
- Human health;
- Buildings and Structures;
- Aesthetics; and
- Production of food, flora and fibre.

Groundwater Assessment

An intrusive groundwater investigation was not undertaken at the site due to the low potential for site derived contamination of groundwater to have occurred. Based on the review of historical activity in the surrounding area and the hydrogeological conditions expected at the site, the Auditor considers that the risk of groundwater occurring at the site is low.

Audit Conclusions

The Auditor is of the opinion that the site is suitable for the following uses:

- Residential land use:
  - Other (lower density);
  - High density;
  - Child care centre;
  - Pre-school;
  - Primary school;
  - Secondary school;
- Recreation / Open space;
- Agricultural;
- Commercial; and
- Industrial.

Summary of Audit Report Information

Category	Details
Auditor	[redacted]
Auditor account number	EXT001145
Date EPA notified of Audit	6 October 2022
Environmental audit reference	EA001358
Name of person requesting audit	[redacted]
Relationship of person requesting audit	Development Manager
Name of site owner	Curlewis Bellarine Pty Ltd
Date of auditor engagement	3 October 2022
Completion date of the audit	21 July 2023
Reason for audit	Planning system / PRSA requirement
Elements of the environment assessed	Land and water
Planning permit number or requirement detail if applicable	
EPA Region	South west
Municipality	City of Greater Geelong
Dominant Lot on Plan	Portion of Lot 1 on Title Plan 198964M Volume 10978 Folio 324
Additional Lot on Plan(s)	NA
Site Premises name	NA
Building/Complex sub-unit No.	
Street/Lot – Lower No.	91 (portion of)
Street/Lot – Upper no.	125 (portion of)
Street Name	Coriyule
Street Type	Road
Street Suffix	
Suburb	Curlewis
Postcode	3222
Site Area (in square metres)	160,000 m^2 (approximately)

<table>
<tr><th>Category</th><th>Details</th></tr>
<tr><td>Plan of site/premises showing the audit site boundary attached</td><td>Attachment 1 of the Environmental audit statement</td></tr>
<tr><td>Members and categories of support team utilised</td><td>Victoria Lazenby – Human Health Risk Assessment</td></tr>
<tr><td>Further works or requirements</td><td>None</td></tr>
<tr><td>Nature and extent of continuing risk of harm</td><td>None</td></tr>
<tr><td>Outcome of environmental audit report</td><td>The Auditor concluded that there is no risk of harm to any environmental value of land or groundwater.</td></tr>
<tr><td>Land use suitability</td><td>Suitable for the use or proposed use</td></tr>
<tr><td>Has groundwater cleanup been undertaken as far as reasonably practicable?</td><td>An intrusive groundwater investigation was not undertaken.</td></tr>
<tr><td>Does groundwater contamination remain at the site and is the site the source?</td><td>An intrusive groundwater investigation was not undertaken.</td></tr>
<tr><td>If groundwater contamination remains, does it extend off-site?</td><td>An intrusive groundwater investigation was not undertaken.</td></tr>
<tr><td>Is a GQRUZ recommended?</td><td>An intrusive groundwater investigation was not undertaken.</td></tr>
<tr><td>If applicable, please indicate which of the following are threatened environmental values of groundwater</td><td>
<table>
<tr><td>Water dependent ecosystems and species</td><td>NA</td></tr>
<tr><td>Potable water supply (desirable)</td><td>NA</td></tr>
<tr><td>Potable water supply (acceptable)</td><td>NA</td></tr>
<tr><td>Potable mineral water supply [1]</td><td>NA</td></tr>
<tr><td>Agriculture and irrigation (irrigation)</td><td>NA</td></tr>
<tr><td>Agriculture and irrigation (stock watering)</td><td>NA</td></tr>
<tr><td>Industrial and commercial use[2]</td><td>NA</td></tr>
<tr><td>Water-based recreation (primary contact recreation)</td><td>NA</td></tr>
<tr><td>Traditional Owner cultural values</td><td>NA</td></tr>
<tr><td>Buildings and Structures</td><td>NA</td></tr>
<tr><td>Geothermal properties</td><td>NA</td></tr>
</table>
Notes:
1. The site is not located in a recognised mineral water province and so this use is not considered relevant in this setting
2. No criteria are currently set for Industrial and commercial use. The contamination occurring in the groundwater may preclude the use of groundwater for some industrial or commercial uses, but this will be process dependent
</td></tr>
<tr><td>Is ongoing groundwater monitoring required?</td><td>No</td></tr>
<tr><td>Is ongoing vapour/gas monitoring required?</td><td>No</td></tr>
<tr><td>Are vapour/gas mitigation measures required?</td><td>No</td></tr>
<tr><td>List any other ongoing management requirements if applicable</td><td>NA</td></tr>
</table>

Physical Site Information

Category	Details
Current EPA permission/s and related permission ID if applicable	
Historical land use	Agricultural
Current land use	Vacant
Proposed land use	Low and medium density residential, recreational use
Current land use zoning	Farming Zone (FZ)
Proposed land use zoning	General Residential Zone (GRZ1)
Surrounding land use - north	Vacant farming land
Surrounding land use - south	Vacant land with a large dam followed by the Bellarine Railway Line and the Curlewis Golf Club
Surrounding land use - east	Tivoli Drive followed by a new low density residential development
Surrounding land use - west	Vacant farmland followed by Newcombe Road
Has EPA been notified about the site under Section 40 of the Environment Protection Act?	No
Nearest surface water receptor-name	Port Phillip Bay
Nearest surface water receptor - direction	North
Likely point of groundwater discharge	Port Phillip Bay approximately 1.8 km north of the site
Site aquifer formation	Quaternary Alluvium aquifer or Upper Tertiary aquifer
Groundwater flow direction	North to north west (inferred)
Groundwater TDS range (mg/L)	3,500 – 7,000 (inferred)
Groundwater segment	Segment C (inferred)
Are there multiple aquifers impacted by pollution at the site	No
Perched groundwater depth - upper	
Perched groundwater depth - lower	
Regional groundwater depth - upper	5 m (inferred)
Regional groundwater depth - lower	10 m (inferred)
Number of bores within 2km	12
Closest extractive use (distance in m)	710 m
Zone of groundwater plume influence (m from site boundary)	NA
Year groundwater last monitored	NA

Common Abbreviations

Term	Definition
ACM	Asbestos Containing Materials
AF	Soil vapour to indoor air attenuation factor
AHD	Australian Height Datum
ALS	ALS Environmental
ANZECC	Australian and New Zealand Environment and Conservation Council
AS	Australian Standards
NEPM	National Environment Protection (Assessment of Site Contamination) Measure (2013)
CEC	Cation Exchange Capacity
COC	Chain of Custody
CSM	Conceptual Site Model
CT	Certificate of Title
cis-1,2-DCE	cis-1,2-Dichloroethene
DO	Dissolved Oxygen
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EAO	Environmental Audit Overlay
EC	Electrical Conductivity
Eco-SSLs	US EPA Ecological Soil Screening Levels
EIL	Ecological Investigation Level
EPA	Environment Protection Authority Victoria
ESL	Ecological Screening Level
GQRUZ	Groundwater Quality Restricted Use Zone
ha	Hectares
HI	Hazard Index
HIL	Health Investigation Level
HSL	Health Screening Level
ILCR	Incremental lifetime cancer risk
km	Kilometres
LOR	Limit of Reporting
m	Metres
m bgl	Metres Below Ground Level
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Litre
MGT	Eurofins MGT
ml	Millilitres
NAPL	Non-Aqueous Phase Liquid
NATA	National Association of Testing Authorities
NC	Not Calculated
ND	Not Detected
NEPC	National Environmental Protection Council
NHMRC	National Health and Medical Research Council
OCP	Organochlorine Pesticides
OPPs	Organophosphorus pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PCE	Perchloroethene / tetrachloroethene
pH	A measure of acidity, hydrogen ion activity
PID	Photoionisation Detector
ppb	Parts Per Billion
ppm	Parts Per Million
PSI	Preliminary Site Investigation

Term	Definition
QA/QC	Quality Assurance / Quality Control
RHSV	Royal Historical Society of Victoria
RPD	Relative Percent Difference
RSLs	US EPA Regional Screening Levels (current version November 2019)
SAQP	Sampling, Analysis and Quality Plan
SD	Standard Deviation
SEPPs	State Environment Protection Policies
SIW	Solid Inert Waste
SQGs	Canadian Soil Quality Guidelines
TCE	Trichloroethene
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
US EPA	United States Environmental Protection Agency
UST / AST	Underground / Aboveground Storage Tank
VC	Vinyl Chloride
VOCs	Volatile Organic Compounds
VVG	Visualising Victoria's Groundwater Database
95% UCL	95% Upper Confidence Level of the Mean

1 Introduction

1.1 Background Information

Mr David Nunn is an appointed Environmental Auditor under Division 1 of Part 8.3 of the Environment Protection Act 2017 and was requested by a representative of the site developer to conduct an Environmental Audit of the property identified as a Portion of 91-125 Coriyule Road, Curlewis, Victoria, (the site). The Environmental Audit was completed in accordance with Division 3 of Part 8.3 of the Environment Protection Act 2017.

A Preliminary Risk Screen Assessment (PRSA) was completed for the entire 91-125 Coriyule Road, Curlewis site by Stephen Cambridge of EHS Support (19 September 2022), of which the subject Audit site comprises the northern portion of the larger PRSA site. Stephen Cambridge concluded that the subject site required an Environmental Audit due to the presence of elevated concentrations of organochlorine pesticides (including dieldrin) in surface soils related to historical cropping activities that exceeded the adopted criterion for human consumption of poultry and eggs. Figure 1 of this Audit Report provides the PRSA Statement Area as identified by Stephen Cambridge as requiring an Environmental Audit.

The planning authority (the City of Greater Geelong) has imposed an Environmental Audit Overlay (EAO) for the Audit area identified in Figure 1 and so this area has been adopted as the Audit area for the purpose of the Environmental Audit.

A site layout plan is provided as Figure 1 attached to this report. The Audit site comprises an area of approximately 16 hectares. Figure 1 shows the site comprises of various vacant paddocks with a farmhouse in the south west portion of the site. The site is bounded to the north by Coriyule Road and to the east by Tivoli Drive.

The Audit site is identified as Stages 1 to 10 and Stage 14 of the proposed subdivision plan entitled *Jetty Road-Stage 2 Development, 91-125 Coriyule Road, Curlewis. Ref: 13588-06, dated 07/07/2022* prepared by Cardno TGM and attached as Appendix B of this Audit Report. It is understood that the site is proposed to be developed for low density and medium density residential and recreational purposes.

The PRSA completed by Stephen Cambridge for the southern portion of the 91-125 Coriyule Road, Curlewis site concluded that an Environmental Audit was not required for this portion of the site, due to the historical use of this portion of the site for grazing purposes.

This Audit Report was prepared in accordance with the guidelines issued by the Environment Protection Authority (EPA) for the Environmental Audit of contaminated sites as referenced in Section 1.6 of this report. This report details the outcome of the Environmental Audit of the subject Audit site.

1.2 Audit Scope

In accordance with Section 208(3) of the Environment Protection Act 2017, the Auditor submitted a *Proposed Scope of Environmental Audit* in the required proforma to EPA on 6 October 2022. The scope included the information summarised in Table 1 below.

Table 1 – Summary of Audit Scope

Category	Details
Name of Auditor	[redacted]
Environmental Audit ID Number	EA001358
Site Address	Portion of 91-125 Coriyule Road, Curlewis, Victoria
Certificate of Title/Property description	Portion of Lot 1 on Title Plan 198964M, Volume 10978 Folio 324
Proposed Use	Sensitive use – other (lower density)
Elements of environment assessed	Land and water. As no surface water was present on the site the water assessment was limited to groundwater.
Environmental values considered	All environmental values that apply to sensitive land use were considered. All environmental values that apply to the applicable groundwater segment were considered.
Standards and reference documents	Environment Reference Standard, May 2021. Other guidance and reference documents are included in Section 1.6 of this Audit Report.
Assumptions and/or limitations	Refer to exclusions
Exclusions from the environmental audit	Ambient air Surface water Ambient sound

The scope of the Environmental Audit was limited to an assessment of the environmental elements of land and groundwater for the following reasons:

- Ambient air was not considered to be relevant in this setting because no potential risks to air quality were identified emanating from the site or from the adjacent sites at the time of the site investigations or the site inspection.
- No surface water bodies occur within the site, therefore this element was not relevant.
- Ambient sound was not considered to be relevant in this setting because no potential risks to sound quality were identified emanating from the site or from the adjacent sites at the time of the site investigations or the site inspection.

1.3 Audit Objectives

The objective of the Environmental Audit was to undertake an independent assessment of the condition of the site and to form an opinion regarding its suitability for low density and medium density residential and recreational purposes.

Therefore, in accordance with Section 208 of the Environment Protection Act 2017, the purpose of the environmental audit is outlined as follows:

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

1.4 Audit Methodology

The Auditor was involved in the following activities in order to fulfil the scope of the Environmental Audit of the site:

- Provided a Proposed Scope of Environmental Audit proforma to EPA on 6 October 2022;
- The Auditor completed a site inspection on 21 May 2023 to observe the site conditions;
- Review of the sampling and quality plans prepared by the assessment consultant for soil investigations;
- Discussions with assessment consultant regarding progressive findings of the assessment program;
- Review of a Remediation Action Plan for the remediation of localised soil contamination;
- Review and evaluation of the documents listed in Section 1.5 of this Audit Report to gain an understanding of the environmental condition of the site and the completeness / adequacy of the site assessment works. The review included an appraisal of:
    - Current and historical activities conducted on and adjacent to the site;
    - Investigation and sampling methodologies used by the assessment consultant;
    - Assessment of the nature and extent of any identified soil and groundwater contamination;
    - Quality assurance and quality control procedures adopted by the assessment consultant; and
    - Understanding the conceptual site model.
- Formed an opinion as to whether all applicable environmental values are being achieved or maintained at the site;
- Formed an opinion regarding the actual condition of the site and identified risks of harm to the environment or human health;
- Provided recommendations to manage the risk of harm to human health or the environment associated with contaminated land; and
- Prepared an Audit Report and an Environmental audit statement in accordance with Section 212 of the Environment Protection Act 2017 and *EPA Publication 2041 Guidelines for Conducting Environmental Audits (February 2022).*

The Auditor's expert support member for Human Health Risk Assessment, Victoria Lazenby of Terravale Consulting Pty Ltd, completed a targeted human health risk assessment for pesticides in soils. This assessment is discussed further in Section 5.3.3 of this Audit Report.

1.5 Assessment Consultant Reports

The assessment consultant for this project was Environmental Site Assessments Pty Ltd. The following reports were reviewed for the purposes of the Audit:

- Environmental Site Assessments Pty Ltd (22 February 2019). Environmental Assessment, 32-70 McDermott Road & 91-125 Coriyule Road, Curlewis. This report is herein referred to as the February 2019 ESA Report. The February 2019 ESA Report is included as Appendix B1 of the PRSA Report (refer below).
- Environmental Site Assessments Pty Ltd (1 August 2022). Environmental Investigation, 91-125 Coriyule Road, Curlewis. This report is herein referred to as the August 2022 Investigation Report. The August 2022 Investigation Report is included as Appendix B2 of the PRSA Report (refer below).
- EHS Support Pty Ltd (19 September 2022). Preliminary Risk Screen Assessment (PRSA). Jetty Road, Stage 2 North Area, Curlewis, Victoria. This report is herein referred to as the PRSA Report. The PRSA Report and the abovementioned supporting investigation reports are included in Appendix C of this Audit Report.
- Environmental Site Assessments Pty Ltd (29 September 2022). OCP in Soil Investigation, 91-125 Coriyule Road, Curlewis. This report is herein referred to as the OCP Investigation Report and is included in Appendix D of this Audit Report.
- Environmental Site Assessments Pty Ltd (30 May 2023). Detailed Site Investigation, 91-125 Coriyule Road, Curlewis. This report is herein referred to as the DSI Report and is included in Appendix E of this Audit Report.

1.6 Guidance Documents

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

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

- EPA Victoria (2022). Guidelines for Conducting Environmental Audits. Publication 2041. February 2022.
- EPA Victoria (2022). Environmental Auditor Guidelines for Appointment and Conduct. EPA Publication 865.13. March 2022.
- EPA Victoria (2021). Guidance for the Cleanup and Management of Contaminated Groundwater. EPA Publication 2001. July 2021.
- EPA Victoria (2021). Environmental Auditor Guidelines – Provision of Statements and Reports for Environmental Audits and Preliminary Risk Screen Assessments. EPA Publication 2022. August 2021.

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.

Policies

- EPA Victoria (2021). Contaminated Land Policy. Publication 1915. February 2021.

EPA Victoria Publications

- EPA Victoria (2022). Hydrogeological Assessment (Groundwater Quality) Guidelines. EPA Publication 668.1. October 2022.
- EPA Victoria (2022). Guideline for Conduct of Preliminary Risk Screen Assessments. Publication 2021. February 2022.
- EPA Victoria (2022). Groundwater Sampling Guidelines. EPA Publication 669.1. February 2022.
- EPA Victoria (2021). Proposed Methodology for Deriving Background Level Concentration when Assessing Potentially Contaminated Land. EPA Publication 1936. January 2021.
- EPA Victoria (2021). Contaminated Land: Understanding Section 35 of the *Environment Protection Act 2017.* EPA Publication 1940. February 2021.
- EPA Victoria (2021). Assessing and Controlling Contaminated Land Risks: A Guide to Meeting the Duty to Manage for those in Management or Control of Land. EPA Publication 1977. June 2021.
- EPA Victoria (2021). Guide to the Environment Reference Standard. EPA Publication 1992. June 2021.
- EPA Victoria (2021). Using SEPPs and WMPs in the New Environment Protection Framework. EPA Publication 1994. June 2021.
- EPA Victoria (2021). *Proposed Guideline.* Notifiable Contamination Guideline – Duty to Notify of Contaminated Land. EPA Publication 2008.1. July 2021.
- EPA Victoria (2018). Closed Landfill Guidelines. EPA Publication 1490.1. January 2018.
- EPA Victoria (2018). Landfill Gas Fugitive Emissions Monitoring Guideline. EPA Publication 1684. February 2018.
- EPA Victoria (2017). Assessing Planning Proposals Within the Buffer. EPA Publication 1642. October 2017.
- EPA Victoria (2016). Landfill Licensing. EPA Publication 1323.3. September 2016.

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.
- CRC Care National Remediation Framework Website. (https://www.crccare.com/knowledge-sharing/national-remediation-framework).
- Canadian Council of Ministers of the Environment (2007). Canadian Environmental Quality Guidelines (www.ccme.ca/en/resources/canadian_environmental_quality_guidelines/index.html).
- Dutch National Institute of Public Health and the Environment, RIVM (2013). Soil Remediation Circular, Version of 1 July 2013.
- National Health and Medical Research Council (2022). Australian Drinking Water Guidelines 6, 2011, Version 3.8 Updated September 2022.
- 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.
- Victorian Government Department of Sustainability and Environment (2010). Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soils. October 2010.

2 Site Characterisation

2.1 Current Site Status

The Audit site comprises the northern portion of the larger site located at 91-125 Coriyule Road, Curlewis, Victoria. The Audit site is irregular in shape and comprises an area of approximately 16 hectares. The site is located on the southern side of Curlewis Road adjacent to a new residential development to the east of the site and the Curlewis Golf Club to the south of the site.

At the time of the inspection by the Auditor on 21 May 2023, the site comprised a largely vacant parcel of land. A farmhouse and associated yard and sheds were located in the south western portion of the site.

The site layout is shown in Figure 1 attached to this Audit Report.

2.2 Proposed Use

At the time of this Audit Report, the Audit site is proposed to be developed for low density and medium density residential and recreational purposes comprising:

- 228 individual allotments ranging in size between 315 m^2 and 587 m^2;
- Several areas allocated for medium density residential development;
- Two dedicated reserve areas; and
- Internal roads.

The proposed subdivision plans are included in Appendix B of this Audit Report. The subdivision plans may be subject to change, however this will not alter the conclusions of this Audit Report for any proposed residential development.

2.3 Zoning

The current zoning of the site is Farming Zone (FZ). The proposed zoning for the site is General Residential (GRZ1).

2.4 Site Features and Potential Sources of Contamination

2.4.1 Above ground Storage Tanks

No above ground storage tanks (ASTs) or evidence of former ASTs were identified at the site.

2.4.2 Underground Storage Tanks

No underground storage tanks (USTs) or evidence of former USTs were identified at the site.

2.4.3 Other Potential Sources

Large areas of the site were used for growing potato crops, therefore pesticide and herbicide soil contamination may be associated with the former cropping areas.

In addition, an infilled dam was located in the north eastern corner of the site.

The site inspection completed by the Auditor on 21 May 2023 confirmed that the site features and potential sources of contamination were consistent with those identified by Environmental Site Assessments Pty Ltd as outlined in the DSI Report and summarised above.

2.5 Surrounding Land Use

The following summarises the land uses in the immediate vicinity of the site:

- North – Coriyule Road followed by vacant farming land formerly used for potato crops.
- South – Vacant land with a large dam (comprising the remainder of the 91-125 Coriyule Road, Curlewis site) followed by the Bellarine Railway Line and the Curlewis Golf Club.
- East – Tivoli Drive followed by a new low density residential development.
- West – Vacant farmland followed by Newcombe Road.

The Auditor confirmed the surrounding site uses during the inspection of the site.

2.6 Environmental Setting Review

2.6.1 Topography

Based on review of the site in Google Earth, the site slopes from 55 m AHD in the south east to approximately 42 m AHD in the north west.

2.6.2 Regional Geology and Onsite Soils

According to the Geological Survey of Victoria 1:63,360 Portarlington map sheet (No.858 Zone 7), the regional geology in the vicinity of the site is characterised by Quaternary aged Holocene and Pleistocene dune deposits comprising siliceous sand sheets, dunes and hills. This was confirmed by the LotSearch assessment included in the DSI report.

The Auditor has reviewed the above information and has confirmed that it is consistent with geological maps and the observed site conditions.

Site investigations indicated that some areas of the site contained shallow surface fill materials comprising orange / brown sandy clays and brown sands to a maximum depth of approximately 0.4 m bgl. The underlying natural soils comprised of brown sandy silts and dark brown clays.

No anthropogenic wastes or asbestos containing materials (ACM) were identified at the site.

2.6.3 Regional Hydrology

Environmental Site Assessments Pty Ltd indicated that the nearest surface water body is Port Phillip Bay located approximately 1.8 km north of the site at its nearest point.

Given the local topography slopes to the north west, Port Phillip Bay is considered to be the probable point of discharge for groundwater emanating from the site.

The Auditor's findings were consistent with that of the assessment consultant.

2.6.4 Regional and Local Hydrogeology

The VVG website indicates that the depth of groundwater is between 5 and 10 m below ground level (bgl) in the Quaternary Alluvium aquifer or the Upper Tertiary aquifer. The VVG website indicates that groundwater in the vicinity of the site has a salinity in the range of 3,500 to 7,000 mg/L total dissolved solids (TDS).

A review of groundwater database search results indicated that groundwater bores in the vicinity of the site were installed at depths between 12.8 and 27.6 m bgl.

The inferred direction of groundwater flow is toward the north to north west towards Port Phillip Bay.

2.6.5 Surface Water Receptors

The nearest surface water body is Port Phillip Bay which is located approximately 1.8 km to the north of the site.

2.6.6 Groundwater Database Search

A search for registered groundwater users in the vicinity of the site was completed by the Auditor on 13 June 2023 using information provided by the Department of Environment, Land, Water and Planning (DELWP), Water Measurement Information System database (WMIS). The results of the search indicated there were 12 bores registered within a 2 km radius of the site, of which:

- 6 bores were registered for stock and domestic purposes; and
- 6 bores were registered for investigation or observation.

Bore 134237, registered for investigation purposes, was located in the north eastern corner of the site.

The closest bore registered for stock and domestic purposes (48855) was located approximately 710 m south east of the site on the adjacent residential development. The Auditor notes that this bore was installed in 2011 when the adjacent land was also a farm, therefore given the recent low density residential development, this bore is not likely to be in use at the current time.

The next closest bore registered for stock and domestic purposes (48857) was located approximately 860 m west of the site on a farm property and therefore is likely to be in use. The remaining wells registered for extractive uses were located more than 1 km from the Audit site.

Due to the distance of these bores from the site, and the inferred northerly groundwater flow direction, with groundwater discharging to Port Phillip Bay to the north of the site, the Auditor considers that it is unlikely that any potential groundwater pollution emanating from the site would impact on the quality of groundwater extracted in these nearby wells.

3 Site History Review

The majority of the site history information was reported in the February 2019 ESA Report prepared by Environmental Site Assessments Pty Ltd and supplemented by information in the DSI report (May 2023). The following information was included in the PSI:

- Site inspection;
- Review of LotSearch information;
- Review of historical land ownership records;
- Review of historic plans and Street directories;
- Review of the EnergySafe Victoria cathodic protection records;
- Search of EPA Registers;
- Review of issued Certificates and Statements of Environmental Audit completed in the vicinity of the site; and
- Aerial photograph search and review (between 1950 and 2021).

The Auditor has reviewed and considered the reports prepared by Environmental Site Assessments Pty Ltd in assessing the historical information relating to the site.

3.1 Site Inspection

A site inspection was conducted by Environmental Site Assessments Pty Ltd during the original investigations completed at the site on 13 February 2019. The following pertinent observations were noted:

- The site comprised vacant farm land.
- A vacant house and associated sheds were located in the south western portion of the site.
- The site was used for livestock grazing.
- A gully is evident on the adjacent property to the south (the remainder of the , 91-125 Coriyule Road, Curlewis site) which also comprises a large dam. The gully is likely to collect surface water during periods of high rainfall.

Additional site inspections were completed by Environmental Site Assessments Pty Ltd during the 2022 and 2023 soil investigations, which indicated that the site remained largely unchanged.

The Auditor conducted a site inspection on 21 May 2023. At the time of the Auditor's site inspection, the site appearance was consistent with that described by Environmental Site Assessments Pty Ltd. No other significant features were noted.

3.2 Local Government Records

LotSearch provided a map of the site overlain on the Planning zones. The map shows that the site is located within a Farming Zone (FZ) which extends to the north, north west and west of the site.

A Special Use Zone – Schedule 3 is located to the south of the site over the railway easement and is currently used as a golf course. The land to the east of the site is zoned as General Residential Zone – Schedule 1, with a small area zoned Commercial 1 Zone which is currently occupied by a shopping centre.

The site is also subject to a Cultural Heritage Overlay.

The Auditor has verified that the above information was correct at time of writing the Audit Report.

3.3 Land Ownership

A search of the historical land ownership was conducted by Environmental Site Assessments Pty Ltd. Copies of the Historical Certificates of Title are provided in Appendix 3 of the February 2019 ESA Report. The Auditor has reviewed the information provided by Environmental Site Assessments Pty Ltd and provided the following summary of the historical land ownership.

Table 2 – Historical Titles

Land Title	Vol/Folio	Parent Vol/Folio	Registered Owners	Date
Lot 1 on Title Plan 198964M	10978/324	09105/585	Curlewis Bellarine Pty Ltd	25/01/2018
Lot 1 on Title Plan 198964M	10978/324	09105/585	Mark Ronald Chirgwin	15/09/1998
Lot 15 on Plan of Subdivision No. 10309, Part of Crown Portion Three, Parish of Bellarine, Country of Grant	09105/585	05646/156	Patricia May Gwendoline Chirgwin	14/08/1975
Part of Crown Portion Three, Parish of Bellarine, County of Grant	05646/156	03001/084	Patricia May Gwendoline Chirgwin	16/12/1963
Part of Crown Portion Three, Parish of Bellarine, County of Grant	05646/156	03001/084	Alan Leslie Whitcombe & Ian Maxwell Whitcombe (Farmers)	08/06/1950
Part of Crown Portion Three, Parish of Bellarine, County of Grant	05646/156	03001/084	Amelia Mary Howard	09/04/1930

The historical Titles indicate that the site was initially owned by a private individual in 1930 and was then acquired by famers between 1960 until 1963 when the site was purchased by Patricia May Gwendoline Chirgwin. The site was acquired by the current site owner, Curlewis Bellarine Pty Ltd, in 2018.

3.4 Anecdotal Evidence

An interview was conducted with the previous site owner (Mark Chirgwin) as part of the

original investigations completed at the site in 2019. The following pertinent information was obtained:

- The northern portion of the site was used for growing crops and was rotated for grazing purposes.
- The southern portion of the site was used for grazing purposes only.

The Auditor notes that this information was consistent with aerial photograph observations.

3.5 Sands & McDougall Directories

A summary of the entries in the various Sands & McDougall Directories and other historical information was reviewed by the Auditor. The pertinent findings are summarised as follows:

- The 1910 Sands & McDougall directory provided a list of occupants in the Curlewis area which indicated that the area was occupied by farmers. No specific information relating to the site was available.
- The 1920 Sands & McDougall directory indicated that the Curlewis area was occupied by farmers. No specific information relating to the site was available.
- The 1930 Sands & McDougall directory indicated that the Curlewis area was occupied by farmers. No specific information relating to the site was available.
- The 1940 Sands & McDougall directory indicated that the Curlewis area was occupied by farmers and dairymen. No specific information relating to the site was available.
- The 1950 Sands & McDougall directory indicated that the Curlewis area was occupied by farmers and dairy farmers. No specific information relating to the site was available.
- The 1960 Sands & McDougall directory indicated that the Curlewis area was occupied by farmers and dairy farmers. No specific information relating to the site was available.
- The 1970 Sands & McDougall directory did not provide any information with respect to the Curlewis area.
- The final Sands & McDougall directory published in 1974 did not provide any information with respect to the Curlewis area.

3.6 Historical Maps

The Auditor reviewed the 1914, 1929, 1955 and 1970 historical maps provided by LotSearch in the PSI Report which indicated that the site comprised farming land at this time and no significant features were identified in the vicinity of the site.

3.7 EnergySafe Victoria Cathodic Protection Records

Environmental Site Assessments Pty Ltd requested a cathodic protection systems records search for the site by EnergySafe Victoria in order to assess the historical presence of USTs.

The search indicated that no cathodic protection systems had been registered for the site.

3.8 EPA Priority Sites Register

The EPA Priority Sites Register is updated on a regular basis by EPA and provides a list of sites which have been issued with the following:

- Clean Up Notice;
- Pollution Abatement Notice;
- Environment Action Notice:
- Site Management Order;
- Improvement Notice; or
- Prohibition Notice.

A Priority Site indicates that the site or a nearby property may present a potential risk to human health or the environment and therefore requires cleanup and / or management.

The Auditor conducted a search of the EPA Priority Sites Register on 13 June 2023 which indicated that the site is not listed in the Register.

One Priority Site was listed within a 2 km radius of the site, at 97 High Street, Drysdale, which is located approximately 1.9 km east of the site. Information provided on the Victoria Unearthed Website indicates that the site is a current service station and requires ongoing management.

3.9 EPA Landfill Register

Victoria Unearthed information indicated that no current or closed landfills were located within a 2 km radius of the site.

3.10 EPA Register of Permissions

The Auditor undertook a search of the EPA register of facilities licensed under the Environment Protection Act 2017 to identify any potentially significant offsite contamination sources[1].

No registered permissions were listed within 2 km of the site.

3.11 Nearby Sites Previously Subject to an Environmental Audit

The Auditor undertook a search of completed Audit sites within a 2 km radius of the subject site and identified no completed Audits.

The Auditor undertook a search of completed Audit sites within a 3 km radius of the subject site and identified two completed Audits. A summary of pertinent information obtained is summarised in Table 3 below.

[1] https://www.epa.vic.gov.au/about-epa/public-registers

Table 3 – Summary of Completed Environmental Audit Sites

Address/CARMs	Distance and Direction from Audit Site	Former Land Uses	Identified Sources of Contamination	Groundwater Depth and Flow Direction
9-11 Collins Street Drysdale (May 2001) 41558-1	2.5 km north east	Telephone Exchange	None	Not assessed
15 Parkway Place Clifton Springs (May 2012) 69744-1	2.9 km north east	Rural residential	Contaminated soils (metals and asbestos) UST Elevated concentrations of copper, zinc and nitrate reported in groundwater were considered by the Auditor to be associated with regional sources of pollution.	Groundwater was encountered at a depth of approximately 32 m bgl. TDS values between 2,600 mg/L and 4,590 mg/L were reported during the investigations.

The key findings of the completed Audit sites located within a 3 km radius of the site are summarised as follows:

- With the exception of identified point sources, significant contamination was not identified in the soils beneath the Audit sites.
- Regional or offsite sources of copper, zinc and nitrate groundwater contamination were identified for one of the sites.

3.12 EPA Groundwater Quality Restricted Use Zones

The Auditor undertook a review of the Victoria Unearthed website[2] to identify any potentially significant offsite contamination sources.

The search identified no GQRUZs within a 2 km radius of the site.

3.13 Aerial Photograph Review

LotSearch obtained copies of historical aerial photographs which cover the site for the period 1950 to 2017. Copies of the images reviewed are included in Appendix 2 of the February 2019 ESA Report. The Auditor reviewed the aerial photographs and the historical aerial photograph review provided in the February 2019 ESA Report.

The key findings of the aerial photograph review are as follows:

[2] https://www.environment.vic.gov.au/sustainability/victoria-unearthed

- The 1950 aerial photograph indicates that the site is vacant agricultural land and forms part of a much larger agricultural property. A small creek appears to be present on the southern portion of the allotment. The area surrounding the site comprises vacant agricultural land. Coriyule Road is present along the northern site boundary and is not sealed.

  A railway track is located to the south of the site.

- The 1962 photograph indicates that the site is largely unchanged from the previous photograph with the exception of a dam which has been constructed in the north western portion of the site. A line of trees running north to south were also present in the central portion of the site. A fence line is present in the southern portion of the site and divides the site and the adjacent creek, which appears to be dry.

  The area surrounding the site remains largely unchanged.

- The 1964 photograph indicates that the site is largely unchanged from the previous photograph, with the exception of the dam which appears to be larger.

  A dam is also located on the southern portion of the property and forms a part of the surface water body running through the site. The surrounding properties appear to be used for growing crops.

- The 1970 photograph indicates that the northern and central portions of the site appear to have been subdivided into smaller paddocks and used for growing crops.

  The creek in the southern portion of the site appears to be dry. A large dam is present in the western portion of the site. The surrounding properties appear to be used for growing crops. The golf course has been constructed to the south of the site.

- The 1978 photograph indicates that the is largely unchanged from the previous photograph.

  The dam to the south of the site is much larger in size. A rural residential property has been constructed to the west of the site.

- The 1984 aerial photograph indicates that a rural residential property has been constructed in the south western portion of the site. The two central paddocks appear to be used for crop growing and the northern paddock appears to in use for stock grazing purposes.

  The dam to the south of the site appears much smaller in size when compared to the previous aerial photograph. The creek appears to be dry. The remaining surrounding land uses appear to be largely unchanged from the previous aerial photograph.

- The 1990 aerial photograph indicates that the site appears to be largely unchanged from the previous aerial photograph, with the exception of the northern most paddock which appears to be used for crop growing.

  The surrounding land appears to be largely unchanged.

- The 2012 aerial photograph indicates that the site appears to be largely unchanged from the previous aerial photograph.

The dam adjacent to the site to the south appears to be much larger than the previous aerial photograph. Residential development is occurring to the north east of the site.

- The 2017 aerial photograph indicates that the site appears to be largely unchanged from the previous aerial photograph.

  The dam adjacent to the site to the south appears to be much smaller than the previous aerial photograph. Residential development has occurred to the north east of the site and is also occurring to the east of the site.

The Auditor reviewed Google Earth images between 2019 and 2021 which indicated that the site remained largely unchanged over this period of time. Extensive residential development has occurred to the east and north east of the site.

3.14 Previous Contamination Assessments

3.14.1 Environmental Assessment Report (22 February 2019)

Environmental Site Assessments Pty Ltd completed an environmental assessment of two large parcels of land which also comprised the subject Audit site in 2019. The assessment included the following works:

- A site inspection and review of the site setting, geology and hydrogeology.
- A site history review comprising a review of historical Certificates of Title, a review of historical aerial photographs and a review of EPA database searches.
- Collection of soil samples from eight grid-based sampling locations (SP13 to SP18, SP20 and SP21).
- Laboratory analysis of all eight samples for metals (arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc), organochlorine pesticides (OCP) and organophosphorus pesticides (OPPs). In addition, three samples were also analysed for total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylenes (BTEX), cyanide, herbicides, polycyclic aromatic hydrocarbons (PAH), phenols and polychlorinated biphenyls (PCB).
- An appropriate Quality Assurance / Quality Control (QA/QC) program was adopted which included the collection of blind duplicate samples, split duplicate samples, field blank, rinsate and trip blank samples.
- The analytical results indicated that concentrations of 4,4-DDE and dieldrin exceeded the adopted ecological screening values for samples collected from surface soils at sampling locations SP16, SP17 and SP18.

3.14.2 Environmental Investigation Report (1 August 2022)

Environmental Site Assessments Pty Ltd completed a targeted assessment of a small backfilled dam located in the north eastern corner of the subject Audit site. The works comprised the following:

- Four tests (TP05 to TP08) were excavated in the immediate vicinity of the former dam to a depth of approximately 2.5 m bgl.

- Laboratory analysis of 10 soil samples for metals (arsenic, barium, boron, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc), OCP, PAH and TRH.
- In addition, 12 test pits (TP01 to TP12) were excavated in an area of disturbed ground located to the east and west of the infilled dam for observation purposes. These test pits indicated that the fill material used to backfill the dam was also spread to the south and east of the former dam.
- The analytical results indicated that all contaminants were reported below the adopted ecological and human health screening values, with the exception of manganese (246 mg/kg) which exceeded the adopted ecological screening value of 220 mg/kg at sampling location TP07.

3.14.3 Preliminary Risk Screen Assessment (PRSA) – 19 September 2022

A Preliminary Risk Screen Assessment was completed for the subject Audit site by Stephen Cambridge of EHS Support on 19 September 2022.

Stephen Cambridge issued a PRSA Statement which indicated that the northern portion (as defined by provided co-ordinates) of the land parcel located at 91-125 Coriyule Road, Curlewis (the subject Audit site) required an Environmental Audit based on the known presence of organochlorine pesticides (including dieldrin) in surface soils exceeding the adopted criterion for human consumption of poultry and eggs.

Stephen Cambridge issued a PRSA Statement which indicated that the southern portion (as defined by provided co-ordinates) of the land parcel located at 91-125 Coriyule Road, Curlewis did not require an environmental audit and was considered to be suitable for all potential land uses.

Therefore, the subject Audit site was identified as requiring an Environmental Audit to be completed due to the identified concentrations of OCP in shallow soils.

3.15 Areas and Chemicals of Interest

Based on the findings of the site history review, the following activities, areas and chemicals of interest may present an environmental contamination risk at the subject site.

3.15.1 Potential Onsite Sources (Audit Area)

- Importation and use of fill from unknown origin and / or reuse of site / offsite derived fill – contaminants may include metals, PAH, TRH and possibly ACM.
- Agricultural uses – metals, OCP, OPP, herbicides and nutrients.

3.15.2 Potential Offsite Sources

- Agricultural uses – metals, OCP, OPP, herbicides and nutrients.

3.16 Review of the Adequacy of the Site History Information

A summary of the content and adequacy of the site history information is presented in the following table. The data considered by the Auditor is based on Schedule B(2) of the ASC NEPM.

Table 4 – Content and Adequacy of Site History Information

Required Data (refer Schedule B(2) of the ASC NEPM)	Comment
Property details	The property details are correct and were presented in Section 2 of the DSI report, with the Audit site boundary details provided in Figure 1 of this Audit Report, which corresponds with the EAO issued by Council.
Review of historical land ownership	Section 3 of the Environmental Site Assessments Pty Ltd February 2019 ESA Report presents a summary of the historical ownership of the site.
A site inspection to assess the current state of the site and surrounding land uses	The Auditor has completed a site inspection and is familiar with the condition of the site and have also verified the condition of the site as reported by Environmental Site Assessments Pty Ltd.
Review of surrounding land uses	A summary of the surrounding land use is presented in Section 2 of the DSI Report and is consistent with the observations made by the Auditor.
Review of the expected regional geology and hydrogeology	All assessment reports provided an overview of the geology and hydrogeology of the site and the immediate vicinity.
Review of aerial photographs	Section 3.2 of the February 2019 ESA Report presented a summary of an appropriate review of aerial photographs from 1950 to 2012.
Review of local government records, including zoning	A review of local government records and zoning for the site is provided in Appendix 1 of the February 2019 ESA Report.
Interviews	An interview was conducted with the current site owner, whose family members have owned the property between 1963 and 1998. The information provided by the landowner assisted in clarifying potential environmental risks posed by more recent site operations.
Review of relevant environmental reports	The Auditor has provided a review of previous assessments completed for the site in Section 3.14 of this Audit Report.
EPA Information search	Section 4 of the February 2019 ESA Report provided a summary of the EPA search results.
Review of licenses for storage of dangerous goods	A search was undertaken of the EnergySafe Victoria cathodic protection records. The records indicated that no cathodic protection was recorded for the site.
Sands and McDougall directory	The Sands and McDougall directories were reviewed, but no specific information regarding the site area was available.
Historical Societies	No historical societies or books were referenced as part of the assessment.

The Auditor considers that information provided by Environmental Site Assessments Pty Ltd and supplemented by additional findings conducted by the Auditor, provide a thorough review of the available site history information.

The Auditor considers that all the key contaminants and contaminated media which may occur at the site as a result of both onsite and offsite sources of contamination have been identified.

4 Data Quality Objectives

Following the completion of the PSI, the Auditor adopted the seven step Data Quality Objectives (DQO) process presented in the ASC NEPM to determine the appropriate scope of the DSI. The DQO process is detailed below:

1. State the Problem: The primary objective of the DSI was to characterise the nature and extent of potential contamination issues identified during the PSI to the extent that there is a defensible basis for assessing the ultimate goal of the study (see Point 2).
2. Identify the Decision/Goal of the Study: The ultimate goal of the DSI is to determine:
    a. whether or not the condition of the site is detrimental to the environmental values of the Land , Water, and the Air as outlined in the Environment Reference Standard 2021 (ERS).
    b. whether the condition of the site precludes the proposed development; and
    c. if the condition of the site is detrimental to the indicators and objectives of the ERS and / or preclusive of the proposed development, what clean up work is necessary to ensure the site is suitable for its intended use and / or to comply with the various ERS objectives.
3. Identify the Information Inputs:
    a. On the basis of the PSI, the primary media of concern are soil, groundwater and soil vapour. As previously stated, a broad range of potential contaminants are of concern due to the nature of the potentially contaminating activities at and in the vicinity of the site;
    b. A tiered risk assessment approach is conducted in accordance with the ASC NEPM. Tier 1 criteria are sourced from the ASC NEPM, the Environment Reference Standard 2021 (ERS) or other relevant guidelines to assess:
        i. Risks to human health as a result of direct contact exposure to non-volatiles under a range of land use scenarios;
        ii. Risks to human health as a result of direct contact exposure to volatiles under a range of land use scenarios;
        iii. Risks to human health as a result of inhalation exposure to volatiles or to dusts under a range of land use scenarios;
        iv. Risks to the environment under a range of land use scenarios; and
        v. Risks to buildings and structures under a range of land use scenarios.

    Where Tier 1 criteria are not available for a particular contaminant and / or exposure scenario, alternative Tier 1 criteria are sourced or qualitative assessments are relied upon on a case by case basis.
4. Define the Boundaries of the Study:
    a. The spatial boundaries of the study are the boundaries of the Audit site and any land affected by contamination emanating from the Audit site; and
    b. The temporal boundaries of the study are from the time the Audit commenced to the time of this report.

5. Develop the Analytical Approach:
    a. The analytical results are initially compared to Tier 1 criteria on a sample by sample basis;
    b. Where Tier 1 criteria are exceeded, consideration is given to discretisation of the data set by area / lithology and summary statistics (i.e. average, standard deviation, magnitude above Tier 1 criteria);
    c. Risks will be deemed acceptable without further assessment where:
        i. All results are below Tier 1 criteria;
        ii. Where soil Tier 1 criteria are exceeded in individual samples, for each discretised set of data the average concentration is less than the Tier 1 criteria, the standard deviation is less than 50% of the average and the magnitude of the exceedance is less than 250%; and
    d. Where further assessment is necessary, the need for groundwater, surface water and / or air investigations is initially assessed using a qualitative approach on a case by case basis.
6. Specify Performance or Acceptance Criteria: The Auditor established a set of Data Quality Indicators (DQIs) on the basis of the ASC NEPM. These DQIs are defined in Appendix G.
7. Develop the Plan for Obtaining Data: On the basis of Steps 1-6, the Auditor considered that the most effective sampling and analysis design would be as follows (detail only provided for aspects of DQIs which are project specific):
    a. A combination of grid based and targeted soil investigations was deemed most appropriate to assess the general site condition and to identify potential source zones of contamination. The site comprises an area of approximately 16 hectares. The Australian Standard AS4482.1-2005 does not provide a suggested minimum sampling density for sites exceeding a size of 5 hectares. Testing was conducted at 200 grid locations, therefore representing a sampling density of 12.5 samples per hectare, which is considered to be consistent with the minimum sampling density provided in AS4482.1-2005 for sites comprising an area of approximately 4 hectares. An additional 78 delineation sampling locations were also investigated. The Auditor considered that the sampling density was sufficient to provide general coverage across the larger site and to delineate areas impacted by historical OCP spraying practices.
    b. On the basis of the PSI, it was suspected that the contamination would be limited to the placement of fill materials and widespread contamination associated with the surface spraying of OCP and possibly other pesticides.
    c. The soil boreholes were to be extended to the depth necessary to delineate the vertical extent of fill material, and if necessary, the vertical extent of any natural soils displaying visual / olfactory evidence of contamination;
    d. Selected soil samples from each location (one of the fill material at all locations) were to be analysed for the primary contaminants of concern (i.e. OCP). Limited sample analysis was also to be conducted for a broad screen of analytes based on NEPM screening parameters. Analysis of deeper natural soils was to be undertaken based on elevated concentrations reported in fill samples. Elevated photoionisation detector (PID) results

would indicate the need for a more detailed assessment of Volatile Organic Compounds (VOCs).

5 Audit Criteria

5.1 Environmental Values

In accordance with the *Proposed Scope of Environmental Audit* provided to EPA, the Environmental Audit completed for the site considered the following elements of the environment:

- Land; and
- Groundwater.

The *Environment Reference Standard* (ERS) is a legislative instrument under section 93(1) of the *Environment Protection Act 2017* and specifies the environmental values for land and groundwater environments in Victoria and the relevant indicators and objectives to be used to evaluate any risk of harm or detriment. Therefore, the indicators and objectives identified in the ERS have been used as audit criteria to assess the risk to environmental values of land and groundwater as outlined in the following sections.

5.2 Land

In Victoria, the applicable environmental values for the land element are determined by land use categories outlined in Part 4, Clause 11 of the ERS and summarised in the table below.

Table 5 – Environmental Values of Land

Environmental Values	Parks & Reserves	Agricultural	Sensitive use (High density)	Sensitive use - other (lower density)	Recreation / Open space	Commercial	Industrial
Land dependent ecosystems and species							
- Natural ecosystems	✓						
- Modified ecosystems	✓	✓		✓	✓		
- Highly modified ecosystems		✓	✓	✓	✓	✓	✓
Human health	✓	✓	✓	✓	✓	✓	✓
Buildings and structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of food, flora and fibre	✓	✓		✓			

It is understood that the site will be redeveloped for individual low density residential allotments with dedicated areas of medium density residential development and recreational purposes. On this basis, the required land use has been assumed to be *Sensitive use - other (lower density)* and the risk of harm to the following environmental values of land needs to be considered:

- Land dependent ecosystems and species (modified and highly modified);

- Human health;
- Buildings and structures;
- Aesthetics; and
- Production of food, flora and fibre.

All environmental values have been assessed as part of the Audit completed for the site.

5.3 Soil Guidelines

The ERS refers to various sections of the ASC NEPM for the appropriate indicators and objectives for the environmental values identified. Therefore, these indicators and objectives have been adopted as appropriate Audit Criteria for the assessment of risk to the environmental values of land as discussed below.

5.3.1 Ecological Screening Guidelines

Certain contaminants, for example heavy metals, are phytotoxic and human health-based levels may not afford protection to some species of plants if grown on the site. In order to consider the potential for phytotoxicity, contaminant concentrations have been initially compared to the Ecological Investigation Levels (EILs) presented in *Schedule B1 Guideline on Investigation Levels for Soil and Groundwater* included in the ASC NEPM.

Schedule B1 of the ASC NEPM provides EILs for selected metals and organic substances that are applicable for assessing risk to terrestrial ecosystems. In particular, EILs have been derived for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene for three generic land use settings as follows:

- Areas of ecological significance (99% level of species protection);
- Urban residential areas and public open space (80% level of species protection); and
- Commercial and industrial land uses (60% level of species protection).

The EILs are used as screening values, below which indicate that ecological impacts are unlikely to occur. Should guideline values be exceeded, then further investigation and evaluation may be necessary.

Similarly, Ecological Screening Levels (ESLs) provided in Schedule B1 of the ASC NEPM have been adopted for petroleum hydrocarbons that are applicable for assessing potential risks to terrestrial ecosystems. It is noted that the ESLs broadly apply to coarse and fine grained soils and various land uses. They are applicable to the upper 2 m of soil at the subject site.

Where EIL / ESL values have not been defined in the ASC NEPM, or where site-specific EILs for certain inorganic parameters have not been derived as part of the assessment process, other criteria have been adopted from the following sources:

- Canadian Council of Ministers for the Environment (CCME), *Canadian Soil Quality Guidelines (SQGs) for the Protection of Environmental and Human Health;* and
- United States Environmental Protection Authority (US EPA) *Ecological Soil Screening Levels* (Eco-SSLs).
- *Government of Western Australia – Department of Primary Industries and Regional*

Development criterion of 0.06 mg/kg for OCP being protective of poultry and eggs for human consumption;

The use of the SQGs for initial screening of soil quality data is considered appropriate where EILs / ESLs are unavailable, as these values have been derived using a comparable methodology to the ASC NEPM approach, utilising a risk based species sensitivity distribution methodology based on land use as follows:

- Agricultural (75% level of species protection);
- Residential / Parkland (75% level of species protection);
- Commercial (50% level of species protection); and
- Industrial (50% level of species protection).

In the absence of available Canadian SQGs, the lowest US EPA Eco-SSLs have been adopted. The Eco-SSLs were derived using a less preferred geometric mean method and are not risk-based. For that reason, the Eco-SSLs are generally more conservative than the Canadian SQGs.

5.3.2 Human Health Guidelines

The ASC NEPM Health Investigation levels (HILs) have been developed for a broad range of inorganic and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure. The HILs are generic to all soil types and apply generally to a maximum depth of 3 m below the surface for residential use.

Health Screening Levels (HSLs) have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. The HSLs are dependent upon specific soil physicochemical properties, land use scenarios, and the characteristics of building structures. They apply to different soil types, and depths below ground surface.

The health investigation and screening levels are provided for a range of land uses including:

- HIL / HSL A: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools;
- HIL / HSL B: Residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats;
- HIL / HSL C: Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bush land and reserves) which should be subject to a site-specific assessment where appropriate; and
- HIL / HSL D: Commercial / industrial such as shops, offices, factories and industrial sites.

The HIL / HSL A values have been adopted as initial human health screening criteria for the assessment of the proposed low density residential land use. Clay soils have been adopted for the HSLs, consistent with the observed site geology. Any exceedances of the HIL / HSL A criteria will be then assessed against the HIL / HSL, B, C and D criteria.

In addition to appropriate consideration and application of the HSLs and ESLs, the ASC NEPM (2013) provides "Management Limits" for petroleum hydrocarbons, which reflect the nature and properties of petroleum hydrocarbons:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosive hazards; and
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services by hydrocarbons.

TRH results will also be screened against the ASC NEPM (2013) Management Limits for TRH fractions F1–F4.

An exceedance of an investigation level does not indicate that there is an unacceptable risk to human health, but rather that further site-specific assessment is required to quantify the potential risk to human health.

5.3.3 Human Health Risk Assessment for Organochlorine Pesticides

The City of Greater Geelong allows the keeping of up to 12 hens without a permit on residential properties. Therefore, the uptake of OCP by poultry and the potential human consumption of poultry and eggs was identified as the main potential exposure route for ingestion of OCP.

Given that concentrations of OCP exceeded the adopted screening values for the protection of poultry and eggs provided by the *Government of Western Australia – Department of Primary Industries and Regional Development* of 0.06 mg/kg for total OCP at a number of locations, the Auditor's expert support team member, Victoria Lazenby of Terravale Consulting Pty Ltd, completed a targeted Human Health Risk Assessment (HHRA) for individual OCP in soils. The risk assessment also considered the consumption of home grown produce including fruit, vegetables and eggs.

Site specific trigger levels were calculated for the following OCP:

- Dieldrin - 0.4 mg/kg; and
- DDT+DDE+DDD – 7 mg/kg.

Therefore, the site specific criteria derived by the Auditor's expert support member have been adopted for the Environmental Audit.

A copy of the HHRA report is attached as Appendix F of this Audit Report.

5.3.4 Buildings and Structures

For some substances such as phenols and sulphates, their impact on structures (effects on PVC piping and cement) may override the health and environmental considerations. As outlined in the ASC NEPM (1999), a structural guideline of 2,000 mg/kg is set for sulphate in soil.

Australian Standard AS 2159 (2009) *Piling – Design and Installation* provides exposure classification values for concrete and steel piles in soil (non-aggressive to very severely aggressive). These guidelines are considered to be appropriate in assessing the potential for detrimental impacts of site soils to buildings and structures.

In addition, the presence of other aggressive chemical compounds (e.g. acids) may be potentially detrimental to buildings or structures.

5.3.5 Aesthetics

The ERS states that the indicator for the environmental value aesthetics is "*Any chemical substance or waste that may be offensive to the senses.*" and the objective is *"Land that is not offensive to the senses of human beings."*

Therefore, these indicators have been adopted for evaluating the risk to aesthetics of land.

5.3.6 Asbestos

For the assessment of asbestos, the Auditor has referred to the ASC NEPM which indicates that based on the proposed low density residential use of the site, the following screening values would apply:

- 0.01% w/w asbestos in soil for bonded asbestos containing material (ACM);
- 0.001% w/w asbestos is soil for friable asbestos (FA) and asbestos fines (AF);
- No visible asbestos for surface soil.

5.3.7 Summary of Auditor's Soil Criteria

The soil screening values adopted for assessing the risk to harm to human health or the environment from contaminated land are summarised in Table 6.

Table 6 – Auditor Soil Screening Criteria (mg/kg)

Chemical substance	EIL / ESL	HIL / HSL A Standard residential with garden / accessible soil, childcare centre
Inorganics / Metals		
Arsenic	100	100
Barium	500(1)	15,000(5)
Beryllium	4(1)	60
Boron	-	4,500
Cadmium	10(1)	20
Trivalent Chromium	190(2)	12,000(5)
Hexavalent Chromium	0.4(1)	100
Cobalt	50(1)	100
Copper	220(2)	6,000
Lead	1,100(2)	300
Manganese	220(3)	3,800
Mercury (inorganic)	6.6(1)	40
Mercury (methyl)	-	10
Nickel	320(2)	400
Selenium	1(1)	200
Tin	50(1)	4,700(5)
Vanadium	130(1)	390(5)
Zinc	720(2)	7,400
Organics		
Dieldrin	0.4(9)	0.4(9)
Chlordane	-	50
DDT+DDD+DDE	7(9)	7(9)

Chemical substance	EIL / ESL	HIL / HSL A Standard residential with garden / accessible soil, childcare centre
DDT	-	1.9(6)
Endosulfan	-	270
Endrin	-	10
Heptachlor	-	6
HCB	-	10
Methoxychlor	-	300
Mirex	-	10
Toxaphene	-	20
Benzo(a)pyrene or as Benzo(a)pyrene TEQ (Toxicity Equivalent Quotient)	0.7	3
Naphthalene	170	3(7)
Total PAHs	18(3)	300
Polychlorinated Biphenyls (PCB)	1.3(1)	1
Phenol	3.8(1)	3,000
F1 C_6-C_{10}	180(4)	45(7)
F2 >C_{10}-C_{16}	120(4)	110(7)
F3 >C_{16}-C_{34}	300(4)	2,500(8)
F4 >C_{34}-C_{40}	2,800(4)	10,000(8)
Benzene	50(4)	0.5(7)
Toluene	85(4)	160(7)
Ethylbenzene	70(4)	55(7)
Xylenes	105(4)	40(7)
Miscellaneous		
Cyanide (free)	-	250
pH	6-8(1)	6-8(1)
Fluoride	400(1)	310(5)

Notes:
(1) CCME, Canadian Soil Quality Guidelines (SQG) for the Protection of Environmental and Human Health - Residential/Parkland
(2) Site Specific EIL
(3) US EPA Ecological Soil Screening Levels (Eco-SSLs): PAH – soil invertebrate criterion
(4) ASC NEPM 2013 Generic ESL for Urban Residential and Public Open Space for coarse soils
(5) US EPA (2022) Regional Screening Levels, resident soil, noncarcinogenic, child, HI=0.1
(6) US EPA (2022) Regional Screening Levels, resident soil, carcinogenic, child, risk=1:1,000,000
(7) ASC NEPM Soil HSLs for Vapour Intrusion for sandy soils, depth 0 to <1 m, screening values for other depths were also considered as appropriate
(8) ASC NEPM Management Limits for TRH fractions, coarse soils
(9) Site Specific Trigger Levels for dieldrin and DDT+DDE+DDD derived by the Auditor's expert support team member for Human Health Risk Assessment

5.3.8 Soil Guideline Summary

The soil guidelines and the order in which they have been adopted for screening purposes were as follows:

Ecological

- Terravale Consulting Pty Ltd (28 November 2022). Site specific trigger levels (SSTL) for dieldrin and DDT+DDE+DDD
- ASC NEPM EILs (site specific for chromium (III), copper, nickel and zinc using the

methodology provided in the ASC NEPM) and ESLs;

- CCME, Canadian Soil Quality Guidelines (SQGs) for the Protection of Environmental and Human Health;
- US EPA Ecological Soil Screening Levels (Eco-SSLs); and

Human Health

- ASC NEPM HILs and HSLs for standard residential (Setting A);
- ASC NEPM Management Limits for TRH; and
- United States Environmental Protection Agency (US EPA) Regional Screening Levels (May 2022).

6 Auditor Review of Soil Assessment

The Auditor reviewed the soil investigations and remediation works completed by Environmental Site Assessments Pty Ltd as provided in the OCP Investigation Report (attached as Appendix D of this Audit Report) and the DSI Report (attached as Appendix E of this Audit Report). The information provided in these reports was verified by the Auditor through a site inspection and the evaluation of the supporting documentation and data quality.

A summary of the Auditor's review of the pertinent aspects of the soil investigation and remediation works completed at the site are provided in the following sections.

6.1 Soil Investigations

Various stages of soil investigations were completed across the site by Environmental Site Assessments Pty Ltd. The investigations were completed over several stages of works during the period September 2022 to May 2023. The results of these investigations have been provided in the OCP Investigation Report (refer to Appendix D of this Audit Report) and the DSI Report (refer Appendix E of this Audit Report). The investigations comprised the following scope of works:

- Collection of soil samples from 150 grid sampling locations (SB01 to SB150) to depths between 0 and of 0.3 m bgl across the site in September 2022;
- Collection of soil samples at depths between 0.3 and 1.05 m bgl to delineate the vertical extent of dieldrin contamination at sampling locations SB03, SB43, SB44, SB45, SB64, SB88, SB118, SB137 and SB143 in December 2022;
- Collection of soil samples at sampling locations SB04, SB22, SB35, SB53, SB69, SB74, SB100, SB117, SB121 and SB144 at depths between 0 and 0.15 m bgl to determine the potential for herbicides to be present in former cropping areas;
- Collection of soil samples at depths between 0.0 and 0.45 m bgl from 50 grid sampling locations (SB151 to SB200) within the Cultural Heritage Management Area located within the north western portion of the site;
- Collection of delineation samples (SB201 to SB270) at depths between 0 and 0.3 m bgl in the vicinity of original grid sampling locations SB03, SB43, SB44, SB45, SB46, SB64, SB88, SB118, SB137, SB142, SB143 and SB150);
- Collection of further delineation samples (SB271 to SB278) at depths between 0 and 0.3 m in the vicinity of sampling locations SB252, SB253, SB254 and SB255;
- All soil assessment locations were progressed into the natural soils;
- Collection of soil samples at nominated locations in accordance with the Auditor approved Sampling and Quality Plans (SAQP);
- Soil samples were designated as the sampling location followed by a suffix indicating the depth at which the sample was collected from;
- Samples were placed in laboratory supplied acid washed soil jars with Teflon lined lids;
- Screening of duplicate soil samples in the field using a calibrated PID to assess for

the presence of volatile organic compounds;

- Logging of soil samples;
- Analysis of selected soil samples and Quality Control (QC) samples at laboratories accredited by the National Association of Testing Authorities (NATA) for the analyses undertaken. The primary laboratory engaged for the investigation was Eurofins Environment Testing and the secondary laboratory was ALS Environmental; and
- Decontamination of all reusable equipment between sampling locations.

Soil sampling locations are provided in Figure 2 of this report.

6.2 Field Observations

The site surface comprised vacant land and the soil profile comprised of:

- Fill comprising orange / brown sandy clays and brown sands were encountered at depths between 0 and 0.4 m bgl at a number of locations across the site.
- The underlying natural soils comprised of brown sandy silts and dark brown clays.

The maximum depth of investigation was 1.05 m bgl.

All PID results were reported as being less than 0 ppm indicating a low potential for significant volatile contamination in the soil samples.

The borelogs/description for the investigation locations are provided in the various assessment reports.

6.3 Contamination Status of Soils Prior to Remediation

A summary of soil analytical results reporting exceedances of the adopted investigation criteria for the investigations undertaken at the site are summarised in Table 7 below.

Table 7 – Samples Exceeding Adopted Screening Criteria (Pre-Remediation)

Analyte	Concentration Range (mg/kg)	Samples Exceeding Criteria	Reported Concentration (mg/kg)	Auditor Screening Criteria Exceeded (mg/kg)
Beryllium	<5 – 4.3	SB156/0.3-0.45	4.3	EIL (4.0)
Cobalt	<5 - 82	SB156/0.3-0.45	66	EIL (50)
		SB157/0.3-0.45	54	EIL (50)
		SB159/0.3-0.45	82	EIL (50)
Manganese	<5 – 420	TP07/0-0.15	246	EIL (220)
		SB159/0.3-0.45	420	EIL (220)
Vanadium	11 - 310	SB154/0.3-0.45	190	EIL (130)
		SB156/0.3-0.45	310	EIL (130)
		SB157/0.3-0.45	270	EIL (130)
Dieldrin	<0.05 – 1.6	SP16/0-0.15	0.63	SSTL (0.4)
		SB03/0.15-0.3	0.45	SSTL (0.4)
		SB43/0-0.15	0.45	SSTL (0.4)
		SB43/0.15-0.3	1.0	SSTL (0.4)
		SB44/0.15-0.3	1.6	SSTL (0.4)

Analyte	Concentration Range (mg/kg)	Samples Exceeding Criteria	Reported Concentration (mg/kg)	Auditor Screening Criteria Exceeded (mg/kg)
		SB45/0-0.15	0.8	SSTL (0.4)
		SB45/0.15-0.3	0.86	SSTL (0.4)
		SB46/0-0.15	0.49	SSTL (0.4)
		SB64/0-0.15	0.46	SSTL (0.4)
		SB64/0.15-0.3	0.52	SSTL (0.4)
		SB88/0.15-0.3	0.45	SSTL (0.4)
		SB118/0.15-0.3	0.46	SSTL (0.4)
		SB137/0.15-0.3	0.55	SSTL (0.4)
		SB142/0.15-0.3	0.5	SSTL (0.4)
		SB143/0.15-0.3	0.43	SSTL (0.4)
		SB150/0-0.15	0.57	SSTL (0.4)
		SB252/0-0.15	2.1	SSTL (0.4)
		SB253/0-0.15	0.76	SSTL (0.4)
		SB254/0-0.15	0.43	SSTL (0.4)
		SB255/0-0.15	7.4	SSTL (0.4)

6.4 Remediation Works

Site remedial works were conducted as part of the assessment program on 17 April 2023. A summary of the remediation works completed at the site is provided in the following sections.

The Auditor has reviewed the documentation relating to the removal of impacted soils from the various remediation areas across the site including excavation and validation sampling locations and analytical data. The review of the available data set therefore confirms that the information provided in the following sections has been completed as documented in the DSI report prepared by Environmental Site Assessments Pty Ltd.

6.4.1 Sampling Location SB03

Dieldrin impacted soils were excavated from sampling location SP03 located in the north western area of the site. The extent of the excavation was validated by delineation sampling locations SB201, SB202, SB203, SB204, SB267, SB268, SB269 and SB270. In addition, two validation samples (VP01 and VP02) were also collected from the base of the final excavation area.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 3 of this Audit Report depicts the lateral extent of the SB03 excavation area and all validation sampling locations.

6.4.2 Sampling Locations SP16, SB43, SB44, SB45, SB46 and SB64

Dieldrin impacted soils were excavated from sampling locations SP16, SB43, SB44, SB45, SB46 and SB64 located in the central eastern portion of the site. The extent of the excavation was validated by delineation sampling locations SB205 to SB223 and SB225 to SB232. In

addition, validation samples VP03 and VP04 were collected from the base of the final excavation.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 4 of this Audit Report depicts the lateral extent of the SP16, SB43, SB44, SB45, SB46 and SB64 excavation area and all validation sampling locations.

6.4.3 Sampling Location SB88

Dieldrin impacted soils were excavated from sampling location SB88 located in the eastern portion of the site. The extent of the excavation was validated by delineation sampling locations SB225 to SB232. In addition, two validation samples (VP05 and VP06) were also collected from the base of the final excavation area.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 5 of this Audit Report depicts the lateral extent of the SB88 excavation area and all validation sampling locations.

6.4.4 Sampling Location SB118

Dieldrin impacted soils were excavated from sampling location SB118 located in the south eastern portion of the site. The extent of the excavation was validated by delineation sampling locations SB233 to SB240. In addition, two validation samples (VP07 and VP08) were also collected from the base of the final excavation area.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 6 of this Audit Report depicts the lateral extent of the SB118 excavation area and all validation sampling locations.

6.4.5 Sampling Location SB137

Dieldrin impacted soils were excavated from sampling location SB137 located in the south eastern portion of the site. The extent of the excavation was validated by delineation sampling locations SB241 to SB248. In addition, two validation samples (VP11 and VP12) were also collected from the base of the final excavation area.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 7 of this Audit Report depicts the lateral extent of the SB137 excavation area and all validation sampling locations.

6.4.6 Sampling Locations SB142 and SB143

Dieldrin impacted soils were excavated from sampling location SB142 and SB143 located in the south eastern portion of the site. During the delineation sampling program, delineation sampling locations SB252, SB253, SB254 and SB255 also reported dieldrin concentrations

exceeding the adopted screening value. Therefore, further excavation was undertaken to the east of original sampling location SB143.

The extent of the final excavation area was validated by sampling locations SB249, SB250, SB251, SB256, SB257, SB258, SB271, SB273, SB275 and SB277. In addition, two validation samples (VP09 and VP10) were also collected from the base of the final excavation area.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 8 of this Audit Report depicts the lateral extent of the SB142, SB143, SB252, SB253, SB254 and SB255 excavation area and all validation sampling locations.

6.4.7 Sampling Location SB150

Dieldrin impacted soils were excavated from sampling location SB150 located in the south eastern portion of the site. The extent of the excavation was validated by delineation sampling locations SB259 to SB266. In addition, two validation samples (VP13 and VP14) were also collected from the base of the final excavation area.

All samples were analysed for OCP and concentrations of all OCP were reported to be below the adopted screening value or below the laboratory reporting limits.

Figure 9 of this Audit Report depicts the lateral extent of the excavation area and all validation sampling locations.

6.5 Offsite Disposal of Soils

The excavated materials were classified by Environmental Site Assessments Pty Ltd as Fill Material in accordance with EPA Publication 1828.2 (March 2021).

Approximately 174 m^3 of fill material was disposed to the ESG Drysdale landfill.

6.6 Final Status of Onsite Soils

The following section provides an assessment of the final condition of onsite soils following the completion of remediation works.

6.6.1 Laboratory Analysis

A total of 19 primary soil samples were analysed from fill materials and 653 samples were analysed from natural soils across the site during the soil investigations. The soil samples were analysed for a range of contaminants as summarised in Table 8 below.

Table 8 – Summary of Laboratory Analysis (Primary Samples)

Analyses	No. of Samples
Metals (arsenic, barium, beryllium, boron, cadmium, chromium, hexavalent chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc), TRH, BTEX, phenols, herbicides, cyanide, OCP, OPP and PAH	22
Metals (arsenic, barium, beryllium, boron, cadmium, chromium, hexavalent chromium, cobalt, copper lead, manganese, mercury, nickel, selenium, vanadium and zinc), herbicides and OCP	10

Analyses	No. of Samples
Metals (arsenic, barium, beryllium, boron, cadmium, chromium, hexavalent chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc) and OCP	87
OCP	498
Dieldrin	45
Herbicides	10
Chloride and sulphate	5

Notes: OCP – organochlorine pesticides, PAH – polycyclic aromatic hydrocarbons, TRH – total recoverable hydrocarbons, BTEX – benzene, toluene, ethylbenzene and xylenes

The adopted analytical schedule was targeted to the primary contaminants of concern based on the findings of the site history review and included consideration of a wide range of potential contaminants of concern through the use of a broad organic and inorganic screen (EPA screen) on 22 selected samples.

A summary of the analytical results obtained during the investigation is provided in the Summary Results Tables appended to this Audit Report.

6.7 Final Status of Onsite Soils

A total of 672 primary soil samples were selected for laboratory analysis. The results of the analyses have indicated that following the completion of remediation works, reported contaminant concentrations in soils were below the Auditor's adopted ecological screening values, with the exception of those included in Table 9.

Concentrations of contaminants did not exceed the Auditor's adopted human health screening values.

Samples exceeding the NEPM EIL / ESL criteria for Areas of Ecological Significance have been excluded from Table 9 on the basis that the site is not located within an area of ecological significance and so assessment against these criteria is not relevant in this setting.

Table 9 – Samples Exceeding Adopted Ecological Screening Criteria

Analyte	Concentration Range (mg/kg)	Samples Exceeding Criteria	Reported Concentration (mg/kg)	Auditor Screening Criteria Exceeded (mg/kg)
Beryllium	<5 – 4.3	SB156/0.3-0.45	4.3	EIL (4.0)
Cobalt	<5 - 82	SB156/0.3-0.45	66	EIL (50)
		SB157/0.3-0.45	54	EIL (50)
		SB159/0.3-0.45	82	EIL (50)
Manganese	<5 – 420	TP07/0-0.15	246	EIL (220)
		SB159/0.3-0.45	420	EIL (220)
Vanadium	11 - 310	SB154/0.3-0.45	190	EIL (130)
		SB156/0.3-0.45	310	EIL (130)
		SB157/0.3-0.45	270	EIL (130)

Notes:
F – Fill Soil
N – Natural Soil

6.8 Further Assessment of Analytical Results

The NEPM HILs should only be used where there has been adequate characterisation of a site (i.e. sufficient and appropriate sampling). The sampling density and the vertical profile sampling at this site is considered by the Auditor to provide a suitable basis for the characterisation of the status of the soil at this site and so the NEPM HILs are considered appropriate for use at this site.

In comparing the analytical data to the screening criteria, the NEPM notes that, "*The preferred approach is to examine a range of summary statistics including the contaminant range, median, arithmetic/geometric mean, standard deviation and 95% upper confidence limit (UCL).*"

"At the very least, the maximum and the 95% UCL of the arithmetic mean contaminant concentration should be compared to the relevant Tier 1 screening criteria. However, where there is sufficient data available, and it is appropriate for the exposure being evaluated, the arithmetic mean (or geometric mean in cases where the data is log normally distributed) should also be compared to the relevant Tier 1 investigation or screening level. The implications of localised elevated values (hotspots) should also be considered. The results should also meet the following criteria:

- *the standard deviation of the results should be less than 50% of the relevant investigation or screening level, and*
- *no single value should exceed 250% of the relevant investigation or screening level.*

The maximum observed contaminant concentration generally provides a conservative assessment of exposure because if estimated risks from the maximum concentrations are not of concern, then the site should be suitable for use under the CSM considered. However, a maximum concentration may not be representative of the source as a whole and may result in an overestimation or underestimation of risk if the data is extremely limited.

The mean contaminant concentration can be a suitable metric provided that it can be shown that it adequately represents the source being considered."

As the maximum results exceeded the EIL screening level criteria for a range of land uses at the site, the summary statistics for each of the exceeding compounds have been considered in assessing the risk posed by the current site soil contaminant concentrations.

6.8.1 Beryllium

A slightly elevated concentration of beryllium (4.3 mg/kg) exceeding the adopted EIL screening value of 4 mg/kg was reported for the sample collected from natural soils at depths between 0.3 and 0.45 m bgl from sampling location SB156/0.3-0.45. The overlying soil samples collected at depths of 0-0.15 m and 0.15-0.30 m at the same location reported beryllium concentrations below the laboratory reporting limits.

In addition, leachate testing completed for sample SB156/0.3-0.45 reported beryllium concentrations below the laboratory reporting limits, indicating that the beryllium soil contamination was not leachable.

All beryllium concentrations did not exceed the 250% hotspot consideration therefore, a statistical analysis of the beryllium concentrations was completed.

The standard deviation was calculated to be 0.459 mg/kg which did not exceed 50% of the EIL screening value. The 95% UCL was calculated to be 2.144 mg/kg which did not exceed the adopted screening value. Therefore, on the basis of the statistical analysis, the Auditor concluded that the slightly elevated beryllium concentration is unlikely to pose a risk to ecological receptors across the site.

All beryllium concentrations were well below the HIL criteria for all potential uses of the site and on that basis, the Auditor considers there is no risk to human health as a result of the beryllium concentrations in site soils.

6.8.2 Cobalt

Slightly elevated cobalt concentrations (between 54 and 82 mg/kg) exceeding the adopted EIL screening value of 50 mg/kg were reported for samples collected from natural soils at depths between 0.3 and 0.45 m bgl from sampling locations SB156/0.3-0.45, SB157/0.3-0.45 and SB159/0.3-0.45. All remaining samples collected across the site reported cobalt concentrations below the adopted EIL screening value.

In addition, leachate testing completed for sample SB159/0.3-0.45 reported cobalt concentrations below the laboratory reporting limits, indicating that soil cobalt contamination was not leachable.

All cobalt concentrations did not exceed the 250% hotspot consideration therefore, a statistical analysis of the cobalt concentrations was completed.

The standard deviation was calculated to be 14.6 mg/kg which did not exceed 50% of the EIL screening value. The 95% UCL was calculated to be 16.91 mg/kg which did not exceed the adopted screening value. Therefore, on the basis of the statistical analysis, the Auditor concluded that the slightly elevated cobalt concentrations reported at three locations are unlikely to pose a risk to ecological receptors across the site.

All cobalt concentrations were well below the HIL criteria for all potential uses of the site and on that basis, the Auditor considers there is no risk to human health as a result of the cobalt concentrations in site soils.

6.8.3 Manganese

Slightly elevated manganese concentrations of 246 and 420 mg/kg exceeded the adopted EIL of 220 mg/kg for two soil sampling locations, TP07/0-0.15 and SB159/0.3-0.45 respectively. Both samples were collected from natural soils. All remaining samples collected across the site reported manganese concentrations below the adopted EIL screening value.

All manganese concentrations did not exceed the 250% hotspot consideration therefore, a statistical analysis of the manganese concentrations was completed.

The standard deviation was calculated to be 55.59 mg/kg which did not exceed 50% of the EIL screening value. The 95% UCL was calculated to be 57.67 mg/kg which also did not exceed the adopted screening value. Therefore, on the basis of the statistical analysis it was concluded that slightly elevated manganese concentrations are unlikely to pose a risk to ecological receptors.

The Auditor notes that the screening value 220 mg/kg was adopted from the US EPA Ecological Screening Levels (Eco-SSL) for manganese. The screening value was derived using

toxicity data for four different plant species, with the screening value derived using a geometric mean of the data. Therefore, the adopted screening value is likely to be highly conservative and biased with respect to the selected plant species.

The Auditor has also reviewed the information available in the Victorian Background Soil Database[3], which provides background concentrations of various elements in soils across Greater Melbourne and Greater Geelong. The soil database indicates that manganese concentrations up to 407 mg/kg have been reported to be naturally occurring within the dune deposits which have been encountered at the site.

Therefore, based on the available information, the Auditor considers that elevated manganese concentrations are likely to be naturally occurring and therefore on this basis are not considered to pose a significant risk to either ecological based receptors or human health.

6.8.4 Vanadium

Slightly elevated vanadium concentrations (between 190 and 310 mg/kg) exceeding the adopted EIL screening value of 130 mg/kg were reported for samples collected from natural soils at depths between 0.3 and 0.45 m bgl from sampling locations SB154/0.3-0.45, SB156/0.3-0.45 and SB157/0.3-0.45. All remaining samples collected across the site reported vanadium concentrations below the adopted EIL screening value.

In addition, leachate testing completed for sample SB156/0.3-0.45 reported vanadium concentrations below the laboratory reporting limits, indicating that soil vanadium contamination was not leachable.

All vanadium concentrations did not exceed the 250% hotspot consideration therefore, a statistical analysis of the vanadium concentrations was completed.

The standard deviation was calculated to be 61.06 mg/kg which did not exceed 50% of the EIL screening value. The 95% UCL was calculated to be 93.37 mg/kg which did not exceed the adopted screening value. Therefore, on the basis of the statistical analysis, the Auditor concluded that the slightly elevated vanadium concentrations reported at three locations are unlikely to pose a risk to ecological receptors across the site.

All vanadium concentrations were well below the HIL criteria for all potential uses of the site and on that basis, the Auditor considers there is no risk to human health as a result of the vanadium concentrations in site soils.

6.9 Asbestos Containing Materials

Asbestos containing materials (ACM), were not encountered during the site investigations or site inspections.

6.10 Data Usability Assessment

The Auditor has considered the usability of the data against the DQIs in Appendix G. On the basis of this review, the Auditor considers that the soil analytical data is adequately reliable

[3] https://soilexplorer.eres.rmit.edu.au/soil-explorer/

and usable for the purposes of the Audit, noting that the heterogeneity of the fill material must be taken into account when reviewing the data. In practice, this is achieved by assessing the fill material on the basis of statistical assessment of concentrations rather than focusing upon individual sampling location results.

6.11 Adequacy of Assessor's Investigation Program

The site comprises an area of approximately 16 hectares. The Australian Standard AS4482.1-2005 does not provide a suggested minimum sampling density for sites exceeding a size of 5 hectares. Testing was conducted at 200 grid locations, therefore representing a sampling density of 12.5 samples per hectare, which is consistent with the minimum sampling density provided in AS4482.1-2005 for sites comprising an area of approximately 4 hectares. An additional 78 delineation sampling locations were also investigated. The Auditor considered that the sampling density was sufficient to provide general coverage across the larger site and to delineate areas impacted by historical OCP spraying practices.

Soil samples were collected from all lithological layers encountered, including both fill and natural soils (where possible) from the assessment locations. Samples were collected, stored and transported in a manner which would preserve the presence of contaminants in the soil samples between the point of the sampling and receipt by the laboratory. Suitable QC samples were collected at the time of the assessment to verify the sampling and sample handling procedures and to verify the validity of the primary laboratory data.

The Auditor considers that the soil sampling program was adequate to identify potential sources of contamination identified in the site history review and to provide a suitable level of assessment of the fill and natural soils occurring beneath the site.

7 Auditor Review of Groundwater Assessment

7.1 Environmental Values of Groundwater

In Victoria, the applicable environmental values for the groundwater element are determined by the salinity of the groundwater measured as TDS, which defines the Segment of the groundwater.

The environmental values for each Segment are provided in Part 5, Division 2, Clause 15 of the ERS, which is reproduced below.

Table 10 – Environmental Values of Groundwater

Environmental Value	Segments (mg/L TDS)						
	A1 (0-600)	A2 (601-1,200)	B (1,201-3,100)	C (3,101-5,400)	D (5,401-7,100)	E (7,101-10,000)	F (> 10,001)
1. Water dependent ecosystems and species	✓	✓	✓	✓	✓	✓	✓
2. Potable water supply							
- desirable	✓						
- acceptable		✓					
3. Potable mineral water supply	✓	✓	✓	✓			
4. Agriculture and irrigation (irrigation)	✓	✓	✓				
5. Agriculture and irrigation (stock watering)	✓	✓	✓	✓	✓	✓	
6. Industrial and commercial use	✓	✓	✓	✓	✓		
7. Water-based recreation (primary contact recreation)	✓	✓	✓	✓	✓	✓	✓
8. Traditional Owner cultural values	✓	✓	✓	✓	✓	✓	✓
9. Buildings and structures	✓	✓	✓	✓	✓	✓	✓
10. Geothermal properties	✓	✓	✓	✓	✓	✓	✓

According to the VVG database, groundwater beneath the site is expected to have TDS concentrations between 3,500 and 7,000 mg/L. This would place the site groundwater in Segments C and D, as outlined in the ERS. Therefore, adopting the most conservative TDS values classifies groundwater within Segment C as outlined in the ERS.

In accordance with Part 5, Division 2, Clause 15(2) of the ERS, an environmental value may not apply to groundwater if:

- There is insufficient aquifer yield to sustain the environmental value;
- The application of groundwater such as for irrigation, may be a risk to the environmental values of land of the broader environment due to the soil properties; or
- The background water quality level exceeds the relevant objectives and as a result the environmental value cannot be achieved.

7.2 Potential for Groundwater Contamination to Occur

An intrusive groundwater investigation was not completed at the site due to the low potential for groundwater contamination to have occurred through the historical use of the site and based on the contaminant concentrations encountered in soils across the site.

The Auditor considers that the shallow aquifer at the site is not likely to have been impacted by activities at the site based on multiple lines of evidence as follows:

- The site history information indicated that the subject Audit site was used for grazing purposes since at least 1930 with crops established subsequent to 1964.
- No underground fuel tanks or fuel storage were reported to have occurred on the site and no evidence of any underground fuel tanks were observed during the site inspection undertaken by the assessment consultant or Auditor.
- No other point sources of contamination were identified in the site history assessment.
- The soil investigations completed across the site indicated that dieldrin impacted soils were identified in a number of locations to a maximum depth of 0.3 m bgl.
- The underlying natural soils were not contaminated. This was confirmed through laboratory analysis of samples completed by Eurofins and ALS.
- The natural properties of the clays at the site (i.e. low permeability, cation exchange capacity) would significantly retard the vertical migration of any metal or organic contaminants in the shallow soils due to adsorption to the clayey soil matrix.
- Information obtained from the groundwater database search indicated that groundwater in the vicinity of the site is likely to be encountered at depths between 5 m and 10 m bgl. The Auditor considers groundwater is unlikely to have been impacted by site sourced contamination because no significant sources of contamination have been identified at the site.
- Given the depth of the groundwater, any proposed low density residential structures (including basements and swimming pools) to be constructed at the site will not interact with the groundwater environment.
- The surrounding properties in the immediate vicinity of the site reported similar historical uses and therefore the potential for groundwater contamination to have occurred in the vicinity of the site was also considered to be low.

Based on the above lines of evidence, the Auditor considered the groundwater at the site is unlikely to be contaminated by historical activities undertaken at the site, or surrounding sites, and therefore an intrusive assessment of groundwater was not completed at the site. Any potential groundwater contamination is not expected to impact on the use of the land.

8 Conceptual Site Model

As outlined in the ASC NEPM, a Conceptual Site Model (CSM) should include the following components:

- Known and potential sources of contamination;
- Chemicals of concern / interest;
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air);
- Human and ecological receptors; and
- Potential and complete exposure pathways.

The Auditor developed the following CSM based on the information obtained from the PSI.

8.1 Setting

The site is located on the southern side of Coriyule Road adjacent to a recently developed area of Curlewis, Victoria. The subject site encompasses an area of approximately 16 hectares and comprises vacant land.

The site soil profile comprised of:

- Fill comprising orange / brown sandy clays and brown sands were encountered at depths between 0 and 0.4 m bgl at a number of locations across the site.
- The underlying natural soils comprised of brown sandy silts and dark brown clays.

No anthropogenic waste materials were present at any assessment location within the Audit site. No stained or odorous soils were encountered at the site.

Regional groundwater data indicated that groundwater was expected to occur at depths between 5 and 10 m below surface, within the Quaternary Alluvium aquifer or the Upper Tertiary aquifer. A review of groundwater database search results indicated that groundwater bores in the vicinity of the site were installed at depths between 12.8 and 27.6 m bgl.

8.2 Proposed Land Use

The Audit site is proposed to be developed for low density and medium density residential and recreational purposes comprising:

- 228 individual allotments ranging in size between 315 m^2 and 587 m^2;
- Several areas allocated for medium density residential development;
- Two dedicated reserve areas; and
- Internal roads.

8.3 Known and Potential Sources of Contamination

The potential onsite sources of contamination were identified to be associated with the use of pesticides and herbicides during historical cropping activities. In addition, an infilled dam was located in the north eastern portion of the site.

8.4 Contaminants of Concern

The primary sources and contaminants of concern at the site are considered to be:

- Importation and use of fill from unknown origin and / or reuse of site / offsite derived fill – contaminants may include metals, PAH, TRH and possibly ACM. Fill materials derived from the larger site, particularly the adjacent lake construction, are expected to present a low risk of contamination.
- Agricultural uses – metals, OCP, OPP and herbicides.

Potential offsite sources of contamination were also considered to be agricultural uses, therefore the potential contaminants of concern were also considered to be metals, OCP, OPP and herbicides.

Site investigations indicated that onsite soils were not significantly impacted, with localised areas of dieldrin impact identified. All remaining samples reported contaminant concentrations below the adopted ecological screening values and/or below the laboratory reporting limits.

8.5 Mechanisms of Contamination

The primary mechanisms of contamination are:

- Localised impacts from the historical use of OCP for cropping.

A secondary pathway could be the leaching of contaminants from shallow soils to deeper soil and groundwater. However, the secondary pathways are considered minor given that the investigations have indicated no significant contamination in the natural soils across the site and therefore no significant impacts to the natural soils or groundwater are likely to have occurred.

8.6 Potentially Affected Media

Based on the mechanisms of contamination mentioned above, the Auditor considers that the above mechanism could have contributed to site contamination.

Site sources of contamination are anticipated to be restricted to the upper section of the natural soil profile (if at all) and within the identified fill materials.

8.7 Human and Ecological Receptors

The Auditor considers that the primary human receptors of concern are:

- Construction workers involved in redevelopment of the site and subsurface maintenance workers post redevelopment; and
- Future users of the site post redevelopment.

As no significant volatile contamination was identified in the soil profile, the soil vapour pathway is not considered to exist for current or future users of the site and therefore this potential pathway does not require further consideration.

The Auditor considers that the primary ecological receptors of concern would be any vegetation which may be established as part of the site redevelopment and the grazing of chickens if these were to be kept by occupiers. The consumption of chicken eggs and meat could pose a possible health risk pathway for site occupiers.

Other ecological receptors (such as soil fauna) will be highly modified as a result of the long term presence of any contamination and on that basis, will have acclimatised to the presence of the contamination or be insensitive to it.

8.8 Potential and Complete Exposure Pathways

The Auditor considers that of the possible potential exposure pathways which can be relevant for a contaminated site, the significant potentially complete pathway for the site is limited to:

- Contaminated soil > contact / ingestion exposure to construction workers associated with the proposed redevelopment works.
- Contaminated soil > direct contact exposure > future users of the site (residents and subsurface maintenance workers) post development.
- Contaminated soil > exposure of grazing chickens > future users of the site consuming home-grown chicken products (eggs / meat) post development.

The residual shallow fill and natural soils assessment indicated low contaminant concentrations which do not restrict any use of the site. All other potential exposure pathways to contaminated soils are incomplete.

8.9 Preferential Pathways for Vapour Migration

The Auditor considers that soil vapour contamination does not require any further consideration on the basis of the DSI findings. There are no apparent preferential pathways for vapour migration to occur at this site.

8.10 Auditor Conclusion

The Conceptual Site Model has been developed by the Auditor in accordance with the requirements outlined in the ASC NEPM. The Auditor considers that the Conceptual Site Model accurately represents the complete exposure pathways as identified through the site investigations completed at the site.

9 Risk of Harm Assessment

9.1 Land Environmental Values

In Victoria, the protected environmental values for the specific segments / land uses are outlined in the ERS, as summarised in Table 5 of this report. Each environmental value listed in Table 5 has been considered to assess the suitability of the site for its proposed low density residential use.

On this basis, the required land use has been assessed to be for low density residential purposes, consistent with the land use designated as *Sensitive use - other (lower density)* in the ERS.

On this basis, the following environmental values of the site are required to be considered:

- Land dependent ecosystems and species (modified and highly modified);
- Human Health;
- Buildings and structures;
- Aesthetics; and
- Production of food, flora and fibre.

9.2 Indicators and Objectives

Part 4, Clause 11 of the ERS, provides the indicators and objectives which are to be used to assess whether there is a risk of harm or detriment to the environmental values of land. A summary of the Auditor's assessment of the site condition and associated risk of harm to each environmental value is provided below.

9.3 Assessment of Final Condition of Land

9.3.1 Land Dependent Ecosystems and Species (modified and highly modified)

The site is likely to contain ecosystems which have been modified by the historical use of the site. Based on the proposed land use, the environmental value of *Land dependent ecosystems and species (modified and highly modified)* applies to the site.

Following the completion of remediation works and a statistical assessment, no contaminants exceeded the Auditor's adopted ecological screening levels at the site, therefore it is concluded by the Auditor that the environmental value of *Land dependent ecosystems and species (modified and highly modified)* has been achieved and maintained at the site and is therefore protected.

9.3.2 Human Health

No contaminants exceeding the adopted screening criteria for human health were reported in the fill or natural soils collected across the site, therefore it is concluded by the Auditor that the environmental value of *Human Health* has been achieved and maintained at the site and therefore is protected.

9.3.3 Buildings and Structures

The potential risk to the environmental value *Buildings and structures* was assessed based on the reported soil pH (between 6.7 and 8.3 pH units). Based on the lowest reported pH, consideration of the site soils, depth to groundwater, the exposure classification for concrete and steel piles provided

in AS2159-2009 *Piling – Design and installation* (2009) indicates that soil conditions are non-aggressive to concrete piles and non-aggressive to steel piles.

9.3.4 Aesthetics

No aesthetically unacceptable materials were observed during the investigations completed at the site. On this basis, it is concluded by the Auditor that the environmental value of *Aesthetics* has been achieved and maintained at the site and therefore is protected.

9.3.5 Production of Food, Flora and Fibre

Garden areas may be established as part of the future residential development, therefore the environmental value of *Production of food, flora and fibre* is required to be protected.

No contaminants exceeding the adopted Tier 1 screening criteria for ecological protection were reported in the soil samples collected across the site. As a result, the Auditor concluded that the environmental value of *Production of food, flora and fibre* has been achieved and maintained at the site and is therefore protected.

9.4 Risks to Groundwater

Based on multiple lines of evidence provided in Section 7 of this report, an intrusive groundwater investigation was not undertaken at the site due to the low potential for site derived and offsite derived contamination of groundwater to have occurred.

10 Audit Conclusions

The Auditor has reviewed the environmental investigations of the property identified as a portion of 91-125 Coriyule Road, Curlewis, which has provided objective information upon which judgment can be made regarding the suitability of the Audit site for the intended use.

A statutory Environmental Audit was requested by a representative of the site owner to be completed in accordance with Division 3 of Part 8.3 of the Environment Protection Act 2017 to facilitate the rezoning of the land for residential purposes.

The site is proposed to be developed for low density residential, medium density residential and recreational purposes. On that basis, the most sensitive land use has been assessed to be consistent with the land use designated as *Sensitive use - other (lower density)* in the ERS.

10.1 Auditor's Assessment

The Auditor has completed an assessment of whether the condition of the site represents a potential for harm, detriment, or risk to the environmental values of the site, or any other element of the environment. The conclusions of this assessment are the subject of this Audit Report and are summarised briefly in the table below.

Table 11 – Audit Conclusions and Management Requirements

Environmental Value	Audit Conclusions	Management Requirements
Land Environment		
Land dependent ecosystems and species (modified and highly modified)	Concentrations of contaminants in soils did not exceed the adopted ecological screening values. On this basis, the Auditor concludes that the environmental value of *Land dependent ecosystems and species (modified and highly modified)* has been achieved and maintained at the site and is therefore protected.	None
Human health	Concentrations of contaminants in soils did not exceed the adopted *Human health* screening values. On this basis, the Auditor concludes that the environmental value of *Human health* has been achieved and maintained at the site and is therefore protected.	None
Buildings and structures	Naturally occurring pH values (between 6.7 and 8.3 units) were reported for soils across the site. Based on the exposure classification for concrete and steel piles provided in AS2159-2009 Piling-Design and installation (2009), it is concluded that soil conditions are non-aggressive to concrete piles and non-aggressive to steel piles.	None

Environmental Value	Audit Conclusions	Management Requirements
	On this basis, the Auditor concludes that the environmental value of *Buildings and structures* has been achieved and maintained at the site and is therefore protected.	
Aesthetics	No aesthetically unacceptable materials were observed during the investigations completed at the site. On this basis, it is concluded by the Auditor that the environmental value of *Aesthetics* has been achieved and maintained at the site and therefore is protected.	None
Groundwater Environment		
An intrusive groundwater investigation was not undertaken, however, based on multiple lines of evidence provided in Section 7 of this report, the Auditor has concluded that there is a low potential for site derived and offsite derived contamination of groundwater to have occurred.		
Air Segment		
Dust	An assessment of each environmental value of the air environment was not completed, given the condition of the site was considered unlikely to impact the air environment. The Auditor has concluded that no contamination has been identified at the site which is likely to pose a risk to with respect to dust contamination.	None
Landfill gas	Not precluded	None
Surface Water Segment		
Surface Water	Not applicable	Not applicable

10.2 Geotechnical Issues

This Audit Report does not address the geotechnical issues associated with development of the site. The site owner / developer is therefore advised to seek independent geotechnical advice regarding the suitability of the site for its intended use and the suitability of any placed, backfill materials, or any other matters relevant to the geotechnical stability of the site.

10.3 Summary of Conclusions

The Auditor is of the opinion that the site is suitable for Sensitive uses including Low density residential, High density residential, Child care centre, Pre-school, Primary School, Secondary School, Recreation / Open space, Agricultural, Commercial and Industrial.

No recommendations have been made.

Other related information:

1. Not all land uses for which the audit site is considered suitable by this environmental audit may be allowed under the existing City of Greater Geelong planning scheme.

2. Any soil proposed to be excavated and disposed off-site after completion of the environmental audit, must be classified by an appropriately qualified professional in accordance with the Environment Protection Regulations 2021 and EPA guidelines.
3. All fill material proposed to be imported to the audit site after completion of the audit, must be tested and classified as 'Fill Material' in accordance with Environment Protection Regulations 2021 and any relevant EPA designations and guidance.
4. In accordance with Section 214 of the Environment Protection Act 2017, the person in management or control of the site must provide a copy of this environmental audit statement to any person who proposes to become the person in management or control of the site.
5. Specialist advice should be sought in determining the geotechnical suitability of any material for its intended purpose.

11 References

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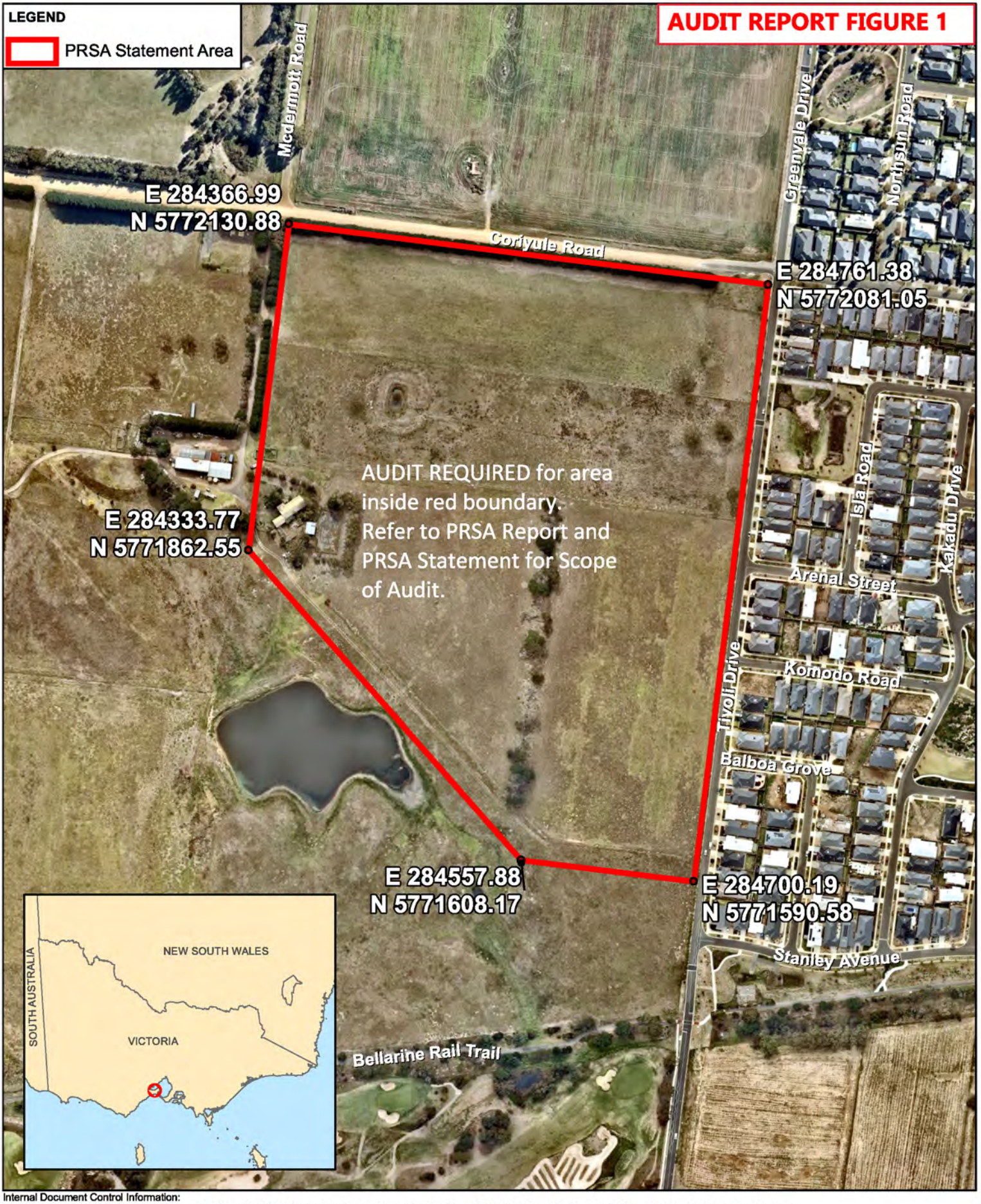
Figures

AUDIT REPORT FIGURE 1



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PRSA Statement Area

0 30 60 120 180 240 Meters
1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

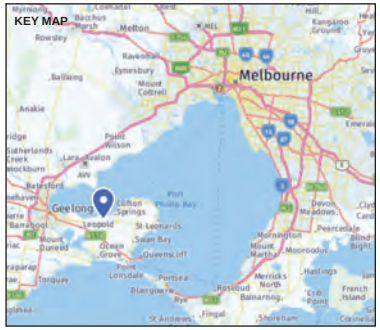
EHS Support

Figure 1-2

CREATED BY:	
APPROVED BY:	
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:4,000
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

N

AUDIT REPORT FIGURE 2



LEGEND

- Sample Point With Dieldrin Results Below 0.4 mg/kg
- Sample Point With Dieldrin Results Above 0.4 mg/kg
- CHMP Sample Points
- Audit Boundary

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
91-125 CORIYULE ROAD, CURLEWIS

TITLE
SAMPLE LOCATIONS

CONSULTANT
Environmental SITE ASSESMENTS

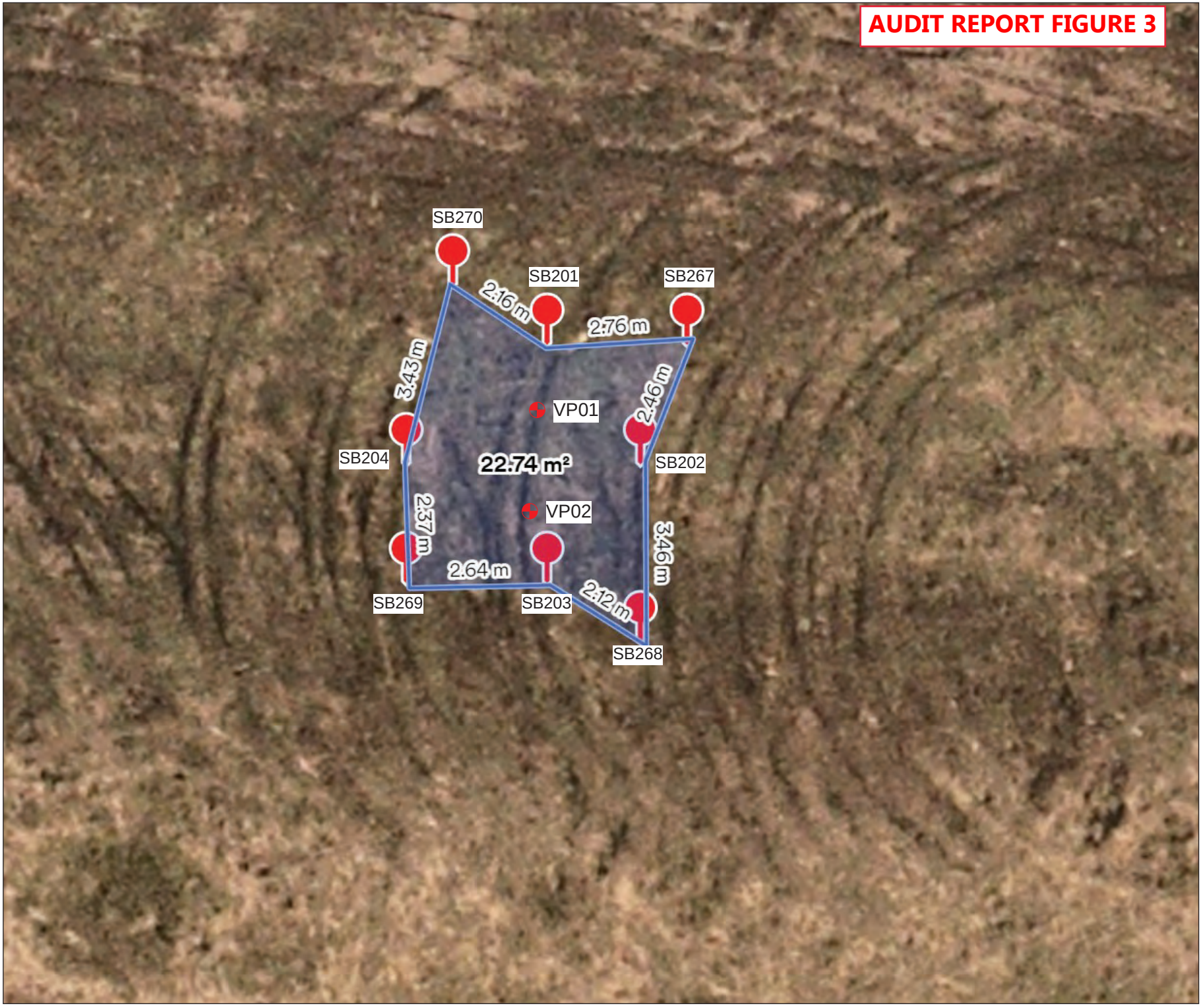
DD-MM-YYYY	09-05-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

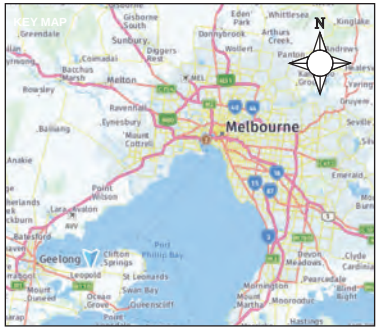
PROJECT NO.	REV.	FIGURE
ESA/2022/222	2	1

0 Metres 60

N

AUDIT REPORT FIGURE 3





LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

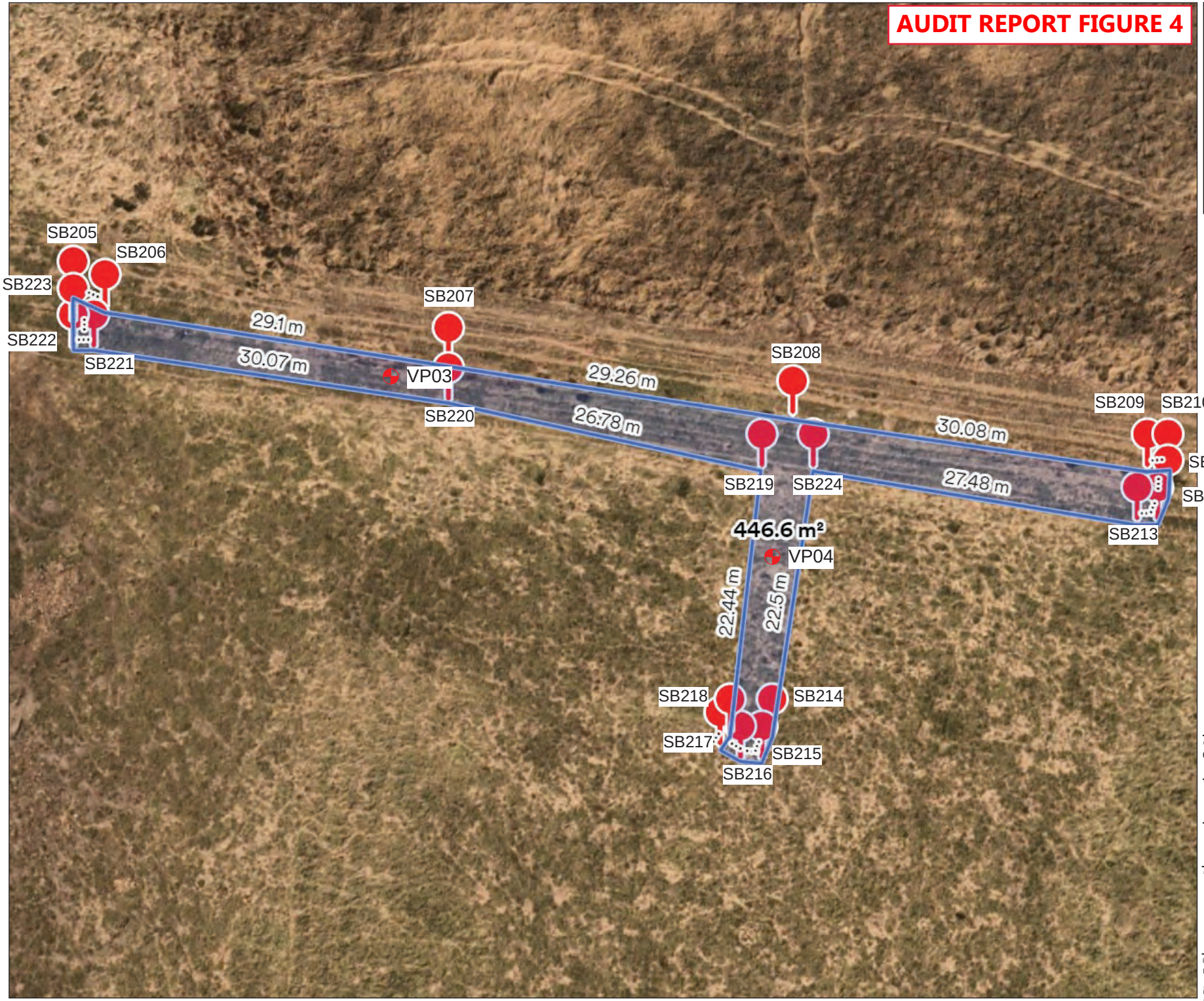
CONSULTANT
Environmental SITE ASSESMENTS

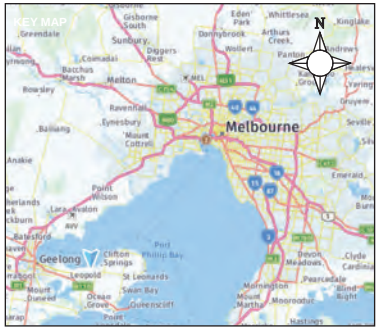
DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	1	1

0 Metres 2

AUDIT REPORT FIGURE 4





LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

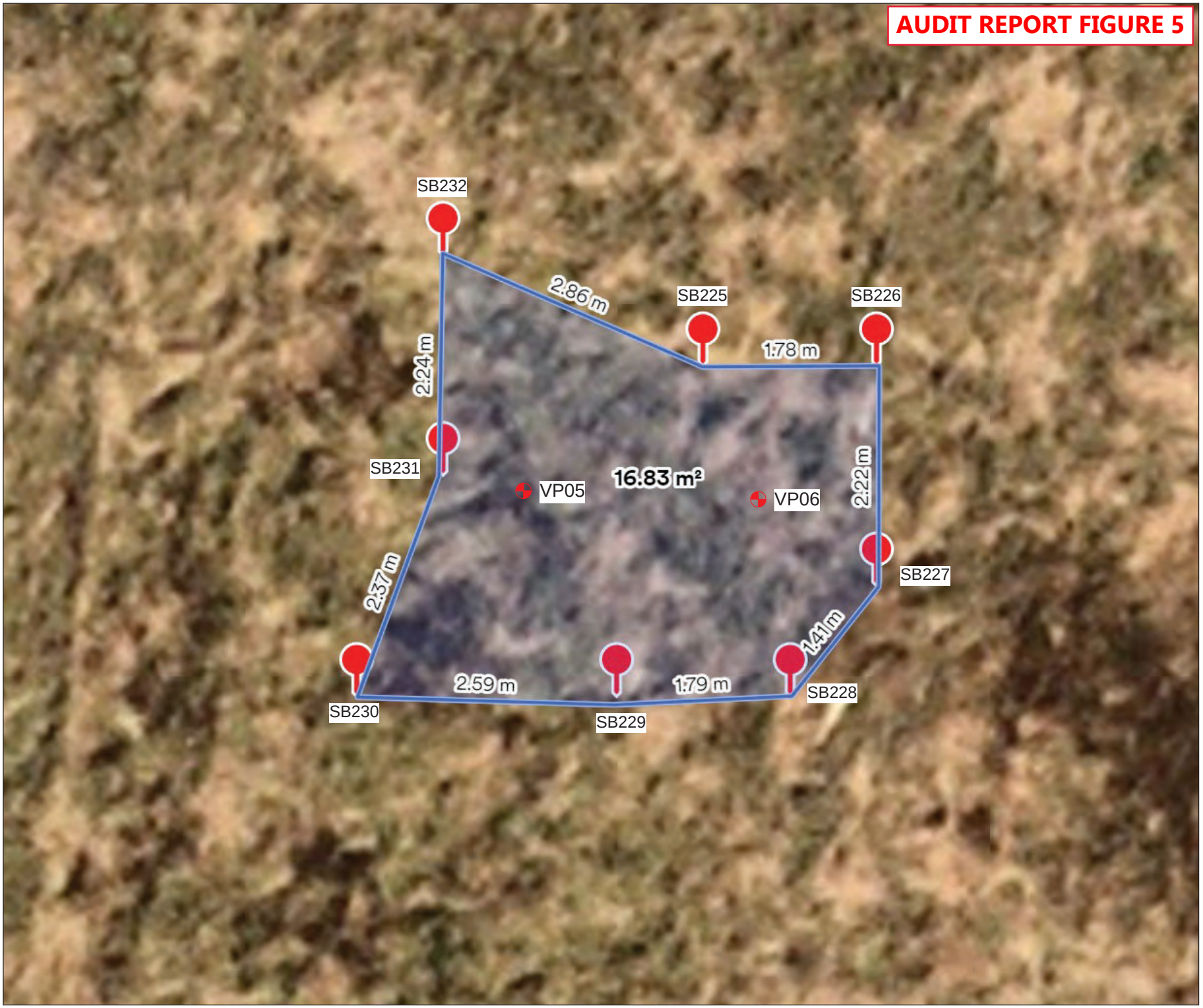
CONSULTANT
Environmental SITE ASSESMENTS

DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	2	1

0 Metres 8

AUDIT REPORT FIGURE 5



LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

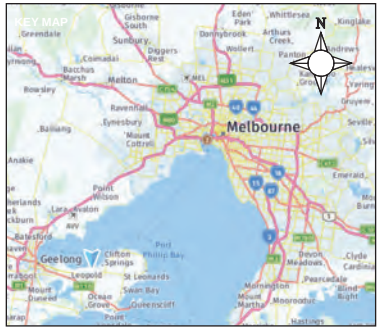
CONSULTANT
Environmental SITE ASSESMENTS

DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	3	1

0 Metres 1

AUDIT REPORT FIGURE 6



LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

CONSULTANT
Environmental SITE ASSESMENTS

DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	4	1

0 Metres 1

AUDIT REPORT FIGURE 7

LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

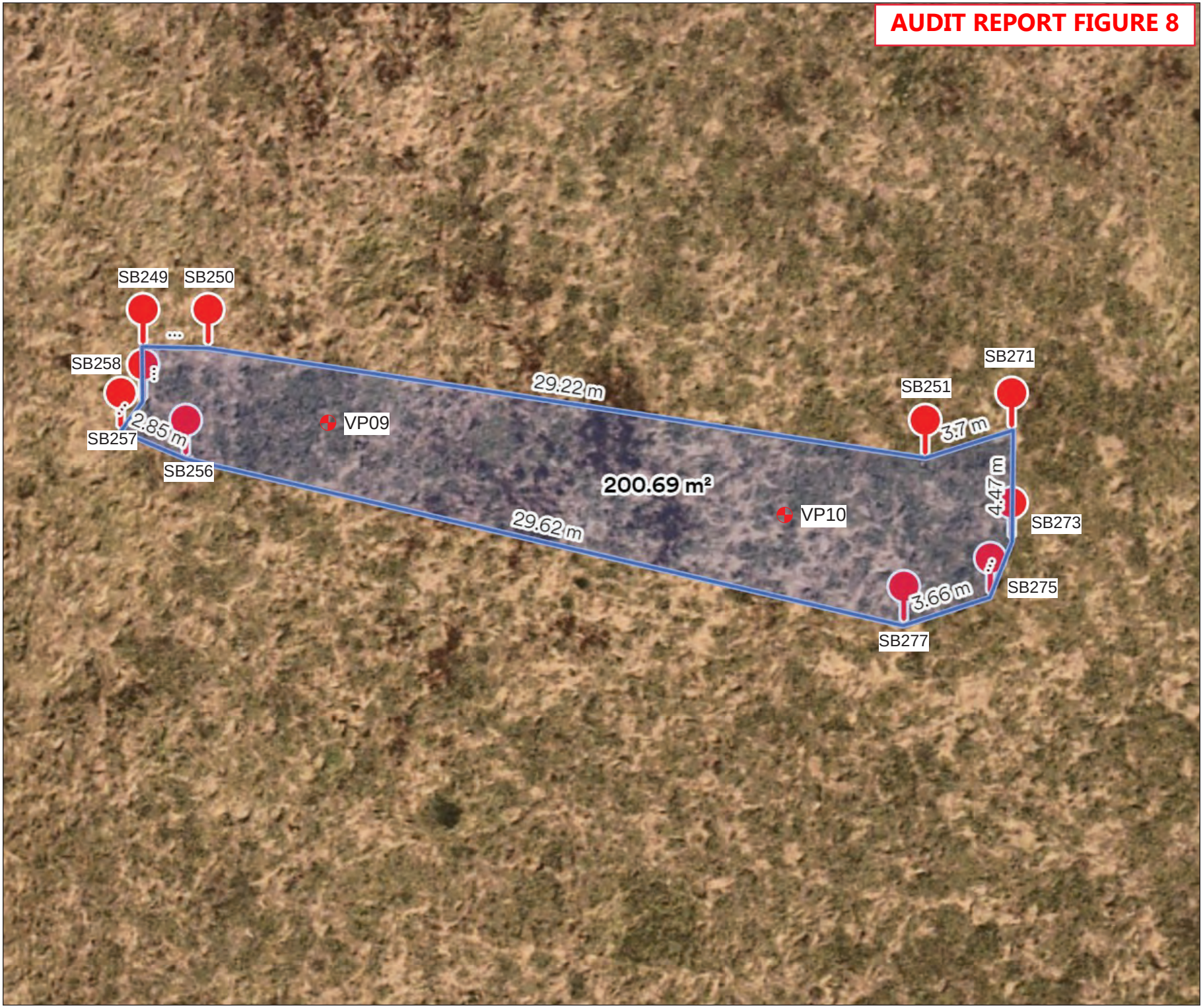
CONSULTANT
Environmental SITE ASSESMENTS

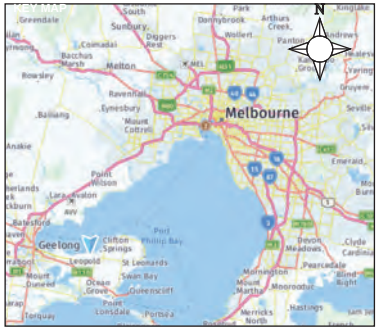
DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	6	1

0 Metres 1

AUDIT REPORT FIGURE 8





LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

CONSULTANT
Environmental SITE ASSESMENTS

DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	5	1

0 Metres 4

AUDIT REPORT FIGURE 9

LEGEND

Sample Point

CLIENT
CURLEWIS BELLARINE PTY LTD

PROJECT
DETAILED SITE INVESTIGATION

TITLE
EXCAVATION & VALIDATION LOCATIONS

CONSULTANT
Environmental SITE ASSESMENTS

DD-MM-YYYY	28-04-2023
DESIGNED	SL
PREPARED	SL
APPROVED	SL

PROJECT NO.	AREA.	FIGURE
ESA/2022/222	7	1

0 Metres 1

Summary Tables

					Metals														Organochlorine Pesticides																
					Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Chromium (Trivalent)	Cobalt	Copper	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate
					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	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					1	10	0.4	0.5	2		2	5	5	0.1	2	5	5	5	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	0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Res A Soil					60	4500	20	100			100	6000	3800	40	400	200		7400				6		50						240		270			
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion																																			
0-1m																																			
NEPM 2013 Table 1B(6) ESLs for Urban Res																																			
0-2m																																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland																																			
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**	**Env_Stds_Conditional_Matrix_Type**																															
SP01	0-0.15	QC03	13/02/2019	SILT	<1	<50	<1	-	14	-	7	5	230	<0.1	9	<5	28	13	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.05	<0.05	<0.05	<0.05	<0.05
SP01	0-0.15	QC04	13/02/2019	SILT	<2	<10	<0.4	<1	16	16	6.8	5.9	220	<0.1	8.9	-	29	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
SP01	0-0.15	SP01/0-0.15	13/02/2019	SILT	<1	<50	<1	-	14	-	7	6	226	<0.1	8	<5	27	14	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.05	<0.05	<0.05	<0.05	<0.05
SP02	0-0.15	SP02/0-0.15	13/02/2019	SILT	<1	<50	<1	-	23	-	7	7	221	<0.1	14	<5	34	16	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.05	<0.05	<0.05	<0.05	<0.05
SP03	0-0.15	SP03/0-0.15	13/02/2019	SILT	<1	<50	<1	-	17	-	8	7	290	<0.1	11	<5	35	14	<0.05	<0.05	<0.05	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.23	<0.05	<0.05	<0.05	<0.05
SP04	0-0.15	SP04/0-0.15	13/02/2019	SILT	<1	<50	<1	<0.5	13	-	6	5	173	<0.1	7	<5	22	13	<0.05	<0.05	<0.05	0.35	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.35	<0.05	<0.05	<0.05	<0.05
SP05	0-0.15	SP05/0-0.15	13/02/2019	SILT	<1	<50	<1	-	10	-	4	<5	93	<0.1	5	<5	24	7	<0.05	<0.05	<0.05	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.28	<0.05	<0.05	<0.05	<0.05
SP06	0-0.15	SP06/0-0.15	13/02/2019	SILT	<1	<50	<1	-	11	-	2	<5	51	<0.1	4	<5	32	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP07	0-0.15	SP07/0-0.15	13/02/2019	SILT	<1	<50	<1	<0.5	6	-	<2	<5	42	<0.1	2	<5	14	13	<0.05	<0.05	<0.05	0.38	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.38	<0.05	<0.05	<0.05	<0.05
SP08	0-0.15	SP08/0-0.15	13/02/2019	SILT	<1	<50	<1	-	6	-	<2	<5	31	<0.1	3	<5	13	9	<0.05	<0.05	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.26	<0.05	<0.05	<0.05	<0.05
SP09	0-0.15	SP09/0-0.15	13/02/2019	SILT	<1	<50	<1	<0.5	4	-	<2	<5	19	<0.1	<2	<5	12	5	<0.05	<0.05	<0.05	0.33	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.33	<0.05	<0.05	<0.05	<0.05
SP10	0-0.15	SP10/0-0.15	13/02/2019	SILT	<1	<50	<1	-	11	-	5	<5	141	<0.1	6	<5	20	9	<0.05	<0.05	<0.05	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.38	<0.05	<0.05	<0.05	<0.05
SP11	0-0.15	SP11/0-0.15	13/02/2019	SILT	<1	<50	<1	-	6	-	<2	<5	42	<0.1	3	<5	12	9	<0.05	<0.05	<0.05	0.35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.35	<0.05	<0.05	<0.05	<0.05
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SP13	0-0.15	SP13/0-0.15	13/02/2019	SILT	<1	<50	<1	-	6	-	<2	<5	40	<0.1	4	<5	22	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP14	0-0.15	SP14/0-0.15	13/02/2019	SILT	<1	<50	<1	<0.5	6	-	<2	<5	26	<0.1	4	<5	26	<5	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP15	0-0.15	SP15/0-0.15	13/02/2019	SILT	<1	<50	<1	-	6	-	<2	<5	37	<0.1	4	<5	19	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP16	0-0.15	SP16/0-0.15	13/02/2019	SILT	<1	<50	<1	-	8	-	3	<5	68	<0.1	4	<5	15	17	0.09	<0.05	<0.05	0.63	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	0.09	0.63	<0.05	<0.05	<0.05	<0.05
SP17	0-0.15	SP17/0-0.15	13/02/2019	SILT	<1	<50	<1	-	3	-	<2	<5	13	<0.1	<2	<5	9	6	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.08	<0.05	<0.05	<0.05	<0.05
SP18	0-0.15	SP18/0-0.15	13/02/2019	SILT	<1	<50	<1	-	6	-	<2	<5	32	<0.1	3	<5	15	7	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.09	<0.05	<0.05	<0.05	<0.05
SP19	0-0.15	SP19/0-0.15	13/02/2019	SILT	<1	<50	<1	<0.5	14	-	3	<5	78	<0.1	12	<5	49	13	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP20	0-0.15	SP20/0-0.15	13/02/2019	SILT	<1	<50	<1	-	4	-	<2	<5	48	<0.1	2	<5	11	9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP21	0-0.15	SP21/0-0.15	13/02/2019	SILT	<1	<50	<1	<0.5	5	-	<2	<5	119	<0.1	2	<5	11	6	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP22	0-0.15	SP22/0-0.15	13/02/2019	SILT	<1	<50	<1	-	4	-	<2	<5	17	<0.1	<2	<5	11	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP23	0-0.15	SP23/0-0.15	13/02/2019	SILT	<1	<50	<1	[illegible]	[illegible]	[illegible]	<2	<5	49	<0.1	<2	<5	9	5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP24	0-0.15	SP24/0-0.15	13/02/2019	SILT	<1	<50	<1	-	5	-	<2	<5	61	<0.1	4	<5	22	8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

95-125 Coriyule Rd
Locations - SP13- SP22

	TRH							BTEX					
	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	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	10	10	50	50	100	100	50	0.2	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion													
0-1m		40|45|50		110|230|280				0.5|0.6|0.7	160|390|480	NL|55			40|95|110
1-2m		65|70|90		NL|240				0.5|0.7|1	NL|220	NL			60|210|310
2-4m		100|110|150		NL|440				0.5|1|2	NL|310	NL			NL|95
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance		125		25	-	-		10	65	40			1.6
EILs 0-<1m BGL													
EILs 1-2m BGL													
Buildings and Structures - Concrete Piles													
Buildings and Structures - Steel Piles													

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time	Env_Stds_Conditional_Matrix_Type												
EIL	1.5-1.65	EIL/1.5-1.65	19/07/2022	CLAY	-	-	-	-	-	-	-	-	-	-	-	-
TP05	0-0.15	QC01	19/07/2022	CLAY	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP05	0-0.15	QC02	19/07/2022	CLAY	<20	<20	<50	<50	<100	<100	<100	-	-	-	-	-	-
TP05	0-0.15	TP05/0-0.15	19/07/2022	CLAY	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP05	2.35-2.5	TP05/2.35-2.5	19/07/2022	SAND	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP06	0-0.15	TP06/0-0.15	19/07/2022	CLAY	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP06	2.45-2.6	TP06/2.45-2.6	19/07/2022	SAND	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP07	0-0.15	TP07/0-0.15	19/07/2022	CLAY	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP07	1.95-2.1	TP07/1.95-2.1	19/07/2022	CLAY	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP08	0-0.15	TP08/0-0.15	19/07/2022	CLAY	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TP08	1.95-2.1	TP08/1.95-2.1	19/07/2022	SAND	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5

❶ US EPA Regional Screening Levels (Residential Use). For direct contact exposure pathways only.
❷ CCME (2007) Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health
❸ US EPA Eco-Tox SSLs
❹ EPA Victoria Publication 1828.2
NE Not Established

		Halogenated Benzenes	Inorganics			Metals										
	Total BTEX	Hexachlorobenzene	Chloride	pH	Sulphate	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Lead	Manganese
	mg/kg	mg/kg	mg/kg	Units	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	0.2	0.05	10		50	2	10	1	10	0.4		2	2	5	5	5
NEPM 2013 Table 1A(1) HILs Res A Soil		10		4-10 (4)		100	15000 (1)	60	4500	20	100	NE	100	6000	300	3800
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion																
0-1m																
1-2m																
2-4m																
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance																
EILs 0-<1m BGL				4-10 (4)		100	500 (2)		NE			NE	50 (2)	220	1109	220 (3)
EILs 1-2m BGL				4-10 (4)		100	500 (2)		NE			NE	50 (2)	60	1108	220 (3)
Buildings and Structures - Concrete Piles				>5.5	<5000											
Buildings and Structures - Steel Piles			<5000	>5												

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time	Env_Stds_Conditional_Matrix_Type														
EIL	1.5-1.65	EIL/1.5-1.65	19/07/2022	CLAY	-	-	990	6.2	480	10	-	-	-	-	-	-	8	8	-
TP05	0-0.15	QC01	19/07/2022	CLAY	<0.2	<0.05	-	-	-	<5	40	<1	<50	<1	-	36	9	8	6	203
TP05	0-0.15	QC02	19/07/2022	CLAY	-	<0.05	-	-	-	7.9	75	<2	17	<0.4	<1	17	<5	11	19	210
TP05	0-0.15	TP05/0-0.15	19/07/2022	CLAY	<0.2	<0.05	-	-	-	7	20	<1	<50	<1	-	22	9	<5	5	172
TP05	2.35-2.5	TP05/2.35-2.5	19/07/2022	SAND	<0.2	<0.05	-	-	-	<5	10	<1	<50	<1	-	11	3	<5	<5	17
TP06	0-0.15	TP06/0-0.15	19/07/2022	CLAY	<0.2	<0.05	440	8.1	60	5	20	<1	<50	<1	-	16	6	<5	<5	76
TP06	2.45-2.6	TP06/2.45-2.6	19/07/2022	SAND	<0.2	<0.05	-	-	-	<5	10	<1	<50	<1	-	11	4	<5	<5	23
TP07	0-0.15	TP07/0-0.15	19/07/2022	CLAY	<0.2	<0.05	-	-	-	5	30	<1	<50	<1	-	23	10	<5	5	246
TP07	1.95-2.1	TP07/1.95-2.1	19/07/2022	CLAY	<0.2	<0.05	-	-	-	16	30	<1	<50	<1	-	25	7	7	5	37
TP08	0-0.15	TP08/0-0.15	19/07/2022	CLAY	<0.2	<0.05	-	-	-	6	20	<1	<50	<1	-	20	6	<5	<5	70
TP08	1.95-2.1	TP08/1.95-2.1	19/07/2022	SAND	<0.2	<0.05	-	-	-	7	30	<1	<50	<1	-	21	8	8	8	96

(1) US EPA Regional Screening Levels (Residential Use). For direct contact exposure pathways only.
(2) CCME (2007) Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health
(3) US EPA Eco-Tox SSLs
(4) EPA Victoria Publication 1828.2
NE Not Established

																					Organochlorine F
	Mercury	Nickel	Selenium	Vanadium	Zinc	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD
	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	2	5	5	5			0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Res A Soil	40	400	200	390❶	7400						6		50						240
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion																			
0-1m																			
1-2m																			
2-4m																			
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance																			
EILs 0-<1m BGL		320		130❷	720													180	
EILs 1-2m BGL		150		130❷	360													180	
Buildings and Structures - Concrete Piles																			
Buildings and Structures - Steel Piles																			

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time	Env_Stds_Conditional_Matrix_Type																			
EIL	1.5-1.65	EIL/1.5-1.65	19/07/2022	CLAY	-	48	-	-	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05	0-0.15	QC01	19/07/2022	CLAY	<0.1	32	<5	44	19	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP05	0-0.15	QC02	19/07/2022	CLAY	<0.1	7.5	-	21	57	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05
TP05	0-0.15	TP05/0-0.15	19/07/2022	CLAY	<0.1	19	<5	46	10	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP05	2.35-2.5	TP05/2.35-2.5	19/07/2022	SAND	<0.1	6	<5	17	<5	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP06	0-0.15	TP06/0-0.15	19/07/2022	CLAY	<0.1	10	<5	34	8	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP06	2.45-2.6	TP06/2.45-2.6	19/07/2022	SAND	<0.1	8	<5	27	<5	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP07	0-0.15	TP07/0-0.15	19/07/2022	CLAY	<0.1	24	<5	43	12	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP07	1.95-2.1	TP07/1.95-2.1	19/07/2022	CLAY	<0.1	20	<5	92	13	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP08	0-0.15	TP08/0-0.15	19/07/2022	CLAY	<0.1	15	<5	43	9	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
TP08	1.95-2.1	TP08/1.95-2.1	19/07/2022	SAND	<0.1	25	<5	55	23	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05

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❹ EPA Victoria Publication 1828.2
NE Not Established

	esticides																			
	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene
	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	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		0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil		270				10				6		300	20						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion																			
0-1m																			
1-2m																			
2-4m																			
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance																			
EILs 0-<1m BGL																			
EILs 1-2m BGL																			
Buildings and Structures - Concrete Piles																			
Buildings and Structures - Steel Piles																			

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time	Env_Stds_Conditional_Matrix_Type																		
EIL	1.5-1.65	EIL/1.5-1.65	19/07/2022	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05	0-0.15	QC01	19/07/2022	CLAY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP05	0-0.15	QC02	19/07/2022	CLAY	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP05	0-0.15	TP05/0-0.15	19/07/2022	CLAY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP05	2.35-2.5	TP05/2.35-2.5	19/07/2022	SAND	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP06	0-0.15	TP06/0-0.15	19/07/2022	CLAY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP06	2.45-2.6	TP06/2.45-2.6	19/07/2022	SAND	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP07	0-0.15	TP07/0-0.15	19/07/2022	CLAY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP07	1.95-2.1	TP07/1.95-2.1	19/07/2022	CLAY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP08	0-0.15	TP08/0-0.15	19/07/2022	CLAY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP08	1.95-2.1	TP08/1.95-2.1	19/07/2022	SAND	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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❸ US EPA Eco-Tox SSLs
❹ EPA Victoria Publication 1828.2
NE Not Established

	PAH												TPH				
	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 (Zero)	PAHs (Sum of total)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36
	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	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	10	20	50	50	50
NEPM 2013 Table 1A(1) HILs Res A Soil											3	300					
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion																	
0-1m								3|4|5									
1-2m								NL									
2-4m								NL									
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance																	
EILs 0-<1m BGL																	
EILs 1-2m BGL																	
Buildings and Structures - Concrete Piles																	
Buildings and Structures - Steel Piles																	

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time	Env_Stds_Conditional_Matrix_Type																	
EIL	1.5-1.65	EIL/1.5-1.65	19/07/2022	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05	0-0.15	QC01	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP05	0-0.15	QC02	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50
TP05	0-0.15	TP05/0-0.15	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP05	2.35-2.5	TP05/2.35-2.5	19/07/2022	SAND	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP06	0-0.15	TP06/0-0.15	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP06	2.45-2.6	TP06/2.45-2.6	19/07/2022	SAND	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP07	0-0.15	TP07/0-0.15	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP07	1.95-2.1	TP07/1.95-2.1	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP08	0-0.15	TP08/0-0.15	19/07/2022	CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
TP08	1.95-2.1	TP08/1.95-2.1	19/07/2022	SAND	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50

❶ US EPA Regional Screening Levels (Residential Use). For direct contact exposure pathways only.
❷ CCME (2007) Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health
❸ US EPA Eco-Tox SSLs
❹ EPA Victoria Publication 1828.2
NE Not Established

	Halogenated Benzenes	Organochlorine Pesticides																									
	Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil	10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development		0.06																								

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																									
SB01	0-0.15	EI/QC01	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB01	0-0.15	EI/QC02	12/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB01	0-0.15	SB01/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB01	0.15-0.3	SB01/0.15-0.3	12/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB02	0-0.15	SB02/0-0.15	12/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB02	0.15-0.3	SB02/0.15-0.3	12/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.21	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.21	-	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB03	0-0.15	SB03/0-0.15	12/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB03	0.15-0.3	SB03/0.15-0.3	12/09/2022	<0.05	0.45	<0.05	<0.05	<0.05	0.45	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.45	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB04	0-0.15	SB04/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB04	0.15-0.3	SB04/0.15-0.3	12/09/2022	<0.05	0.09	<0.05	<0.05	<0.05	0.09	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB05	0-0.15	SB05/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB05	0.15-0.3	SB05/0.15-0.3	12/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB06	0-0.15	SB06/0-0.15	12/09/2022	<0.05	0.05	<0.05	<0.05	<0.05	0.05	<0.1	-	-	<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	<0.05	<0.5
SB06	0.15-0.3	SB06/0.15-0.3	12/09/2022	<0.05	0.05	<0.05	<0.05	<0.05	0.05	<0.1	-	-	<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	<0.05	<0.5
SB07	0-0.15	SB07/0-0.15	12/09/2022	<0.05	0.12	<0.05	<0.05	<0.05	0.12	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB07	0.15-0.3	SB07/0.15-0.3	12/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB08	0-0.15	SB08/0-0.15	12/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB08	0.15-0.3	SB08/0.15-0.3	12/09/2022	<0.05	0.27	<0.05	<0.05	<0.05	0.27	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.27	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB09	0-0.15	SB09/0-0.15	12/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB09	0.15-0.3	SB09/0.15-0.3	12/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB10	0-0.15	SB10/0.-0.15	12/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB10	0.15-0.3	SB10/0.15-0.3	12/09/2022	<0.05	0.28	<0.05	<0.05	<0.05	0.28	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.28	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB11	0-0.15	EI/QC03	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB11	0-0.15	EI/QC04	12/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB11	0-0.15	SB11/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB11	0.15-0.3	SB11/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB12	0-0.15	SB12/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB12	0.15-0.3	SB12/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB13	0-0.15	SB13/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB13	0.15-0.3	SB13/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB14	0-0.15	SB14/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB14	0.15-0.3	SB14/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB15	0-0.15	SB15/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB15	0.15-0.3	SB15/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB16	0-0.15	SB16/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB16	0.15-0.3	SB16/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB17	0-0.15	SB17/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB17	0.15-0.3	SB17/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB18	0-0.15	SB18/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB18	0.15-0.3	SB18/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB19	0-0.15	SB19/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB19	0.15-0.3	SB19/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB20	0-0.15	SB20/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB20	0.15-0.3	SB20/0.15-0.3	12/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB21	0-0.15	EI/QC05	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB21	0-0.15	EI/QC06	12/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB21	0-0.15	SB21/0-0.15	12/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB21	0.15-0.3	SB21/0.15-0.3	12/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

		Halogenated Benzenes	Organochlorine Pesticides																										
		Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		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	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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil		10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development			0.06																								
LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																										
SB22	0-0.15	SB22/0-0.15	12/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB22	0.15-0.3	SB22/0.15-0.3	12/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB23	0-0.15	SB23/0-0.15	12/09/2022	<0.05	0.12	<0.05	<0.05	<0.05	0.12	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB23	0.15-0.3	SB23/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB24	0-0.15	SB24/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB24	0.15-0.3	SB24/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB25	0-0.15	SB25/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB25	0.15-0.3	SB25/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB26	0-0.15	SB26/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB26	0.15-0.3	SB26/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB27	0-0.15	SB27/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB27	0.15-0.3	SB27/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB28	0-0.15	SB28/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB28	0.15-0.3	SB28/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB29	0-0.15	SB29/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB29	0.15-0.3	SB29/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB30	0-0.15	SB30/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB30	0.15-0.3	SB30/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB31	0-0.14	EI/QC08	12/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB31	0-0.15	EI/QC07	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB31	0-0.15	SB31/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB31	0.15-0.3	SB31/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB32	0-0.15	SB32/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB32	0.15-0.3	SB32/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB33	0-0.15	SB33/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB33	0.15-0.3	SB33/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB34	0-0.15	SB34/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB34	0.15-0.3	SB34/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB35	0-0.15	SB35/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB35	0.15-0.3	SB35/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB36	0-0.15	SB36/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB36	0.15-0.3	SB36/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB37	0-0.15	SB37/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB37	0.15-0.3	SB37/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB38	0-0.15	SB38/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB38	0.15-0.3	SB38/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB39	0-0.15	SB39/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB39	0.15-0.3	SB39/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB40	0-0.15	SB40/0-0.15	12/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB40	0.15-0.3	SB40/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB41	0-0.15	EI/QC09	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB41	0-0.15	EI/QC10	12/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB41	0-0.15	SB41/0-0.15	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB41	0.15-0.3	SB41/0.15-0.3	12/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB42	0-0.15	SB42/0-0.15	12/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB42	0.15-0.3	SB42/0.15-0.3	12/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB43	0-0.15	SB43/0-0.15	12/09/2022	<0.05	0.56	0.11	<0.05	<0.05	0.45	<0.1	-	-	<0.05	<0.05	<0.05	0.11	0.45	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB43	0.15-0.3	SB43/0.15-0.3	12/09/2022	<0.05	1.45	0.32	<0.05	<0.05	1	<0.1	-	-	<0.05	<0.05	0.13	0.45	1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

		Halogenated Benzenes	Organochlorine Pesticides																									
		Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		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	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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil		10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development			0.06																								
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																									
SB44	0-0.15	SB44/0-0.15	12/09/2022	<0.05	0.22	<0.05	<0.05	<0.05	0.22	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.22	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB44	0.15-0.3	SB44/0.15-0.3	12/09/2022	<0.05	2.31	<0.05	<0.05	<0.05	1.6	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	1.6	-	<0.05	<0.05	<0.05	0.71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB45	0-0.15	SB45/0-0.15	12/09/2022	<0.05	0.8	<0.05	<0.05	<0.05	0.8	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.8	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB45	0.15-0.3	SB45/0.15-0.3	12/09/2022	<0.05	0.92	<0.05	<0.05	<0.05	0.86	<0.1	-	-	<0.05	0.06	<0.05	0.06	0.86	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB46	0-0.15	SB46/0-0.15	12/09/2022	<0.05	0.67	<0.05	<0.05	<0.05	0.49	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.49	-	<0.05	<0.05	<0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB46	0.15-0.3	SB46/0.15-0.3	12/09/2022	<0.05	0.33	0.07	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB47	0-0.15	SB47/0-0.15	12/09/2022	<0.05	0.2	0.2	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.2	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB47	0.15-0.3	SB47/0.15-0.3	12/09/2022	<0.05	0.35	0.35	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.35	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB48	0-0.15	SB48/0-0.15	12/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB48	0.15-0.3	SB48/0.15-0.3	12/09/2022	<0.05	0.09	<0.05	<0.05	<0.05	0.09	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB49	0-0.15	SB49/0-0.15	12/09/2022	<0.05	0.17	<0.05	<0.05	<0.05	0.17	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.17	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB49	0.15-0.3	SB49/0.15-0.3	12/09/2022	<0.05	0.22	0.07	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB50	0-0.15	SB50/0-0.15	12/09/2022	<0.05	0.38	0.13	<0.05	<0.05	0.25	<0.1	-	-	<0.05	<0.05	<0.05	0.13	0.25	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB50	0.15-0.3	SB50/0.15-0.3	12/09/2022	<0.05	0.61	0.21	<0.05	<0.05	0.28	<0.1	-	-	<0.05	0.06	0.06	0.33	0.28	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB51	0-0.15	EI/QC11	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB51	0-0.15	EI/QC12	14/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB51	0-0.15	SB51/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB51	0.15-0.3	SB51/0.15-0.3	14/09/2022	<0.05	0.17	<0.05	<0.05	<0.05	0.17	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.17	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB52	0-0.15	SB52/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB52	0.15-0.3	SB52/0.15-0.3	14/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB53	0-0.15	SB53/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB53	0.15-0.3	SB53/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB54	0-0.15	SB54/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB54	0.15-0.3	SB54/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB55	0-0.15	SB55/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB55	0.15-0.3	SB55/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB56	0-0.15	SB56/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB56	0.15-0.3	SB56/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB57	0-0.15	SB57/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB57	0.15-0.3	SB57/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB58	0-0.15	SB58/0.0-0.15	14/09/2022	<0.05	0.13	<0.05	<0.05	<0.05	0.13	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.13	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB58	0.15-0.3	SB58/0.15-0.3	14/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB59	0-0.15	SB59/0.0-0.15	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB59	0.15-0.3	SB59/0.15-0.3	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB60	0-0.15	SB60/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB60	0.15-0.3	SB60/0.15-0.3	14/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB61	0-0.15	EI/QC13	14/09/2022	<0.05	0.54	0.15	<0.05	<0.05	0.39	<0.1	-	-	<0.05	<0.05	<0.05	0.15	0.39	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB61	0-0.15	EI/QC14	14/09/2022	<0.05	0.29	0.07	<0.05	<0.05	0.22	<0.05	<0.05	<0.05	<0.05	<0.2	0.07	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB61	0-0.15	SB61/0.0-0.15	14/09/2022	<0.05	0.38	0.09	<0.05	<0.05	0.29	<0.1	-	-	<0.05	<0.05	<0.05	0.09	0.29	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB61	0.15-0.3	SB61/0.15-0.3	14/09/2022	<0.05	0.25	0.07	<0.05	<0.05	0.18	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.18	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB62	0-0.15	SB62/0.0-0.15	14/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB62	0.15-0.3	SB62/0.15-0.3	14/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB63	0-0.15	SB63/0.0-0.15	14/09/2022	<0.05	0.29	<0.05	<0.05	<0.05	0.29	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.29	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB63	0.15-0.3	SB63/0.15-0.3	14/09/2022	<0.05	0.21	<0.05	<0.05	<0.05	0.21	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.21	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB64	0-0.15	SB64/0.0-0.15	14/09/2022	<0.05	0.46	<0.05	<0.05	<0.05	0.46	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.46	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB64	0.15-0.3	SB64/0.15-0.3	14/09/2022	<0.05	0.57	0.05	<0.05	<0.05	0.52	<0.1	-	-	<0.05	<0.05	<0.05	0.05	0.52	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB65	0-0.15	SB65/0.0-0.15	14/09/2022	<0.05	0.25	<0.05	<0.05	<0.05	0.25	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.25	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB65	0.15-0.3	SB65/0.15-0.3	14/09/2022	<0.05	0.22	<0.05	<0.05	<0.05	0.22	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.22	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

				Halogenated Benzenes	Organochlorine Pesticides																								
				Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
				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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil				10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development					0.06																								
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																										
SB66	0-0.15	SB66/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB66	0.15-0.3	SB66/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB67	0-0.15	SB67/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB67	0.15-0.3	SB67/0.15-0.3	14/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB68	0-0.15	SB68/0.0-0.15	14/09/2022	<0.05	0.09	<0.05	<0.05	<0.05	0.09	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB68	0.15-0.3	SB68/0.15-0.3	14/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB69	0-0.15	SB69/0.0-0.15	14/09/2022	<0.05	0.28	<0.05	<0.05	<0.05	0.28	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.28	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB69	0.15-0.3	SB69/0.15-0.3	14/09/2022	<0.05	0.22	<0.05	<0.05	<0.05	0.22	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.22	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB70	0-0.15	SB70/0.0-0.15	14/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB70	0.15-0.3	SB70/0.15-0.3	14/09/2022	<0.05	0.23	<0.05	<0.05	<0.05	0.23	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.23	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB71	0-0.15	EI/QC15	14/09/2022	<0.05	0.1	<0.05	<0.05	<0.05	0.1	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB71	0-0.15	EI/QC16	14/09/2022	<0.05	0.16	<0.05	<0.05	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB71	0-0.15	SB71/0.0-0.15	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB71	0.15-0.3	SB71/0.15-0.3	14/09/2022	<0.05	0.17	<0.05	<0.05	<0.05	0.17	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.17	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB72	0-0.15	SB72/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB72	0.15-0.3	SB72/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB73	0-0.15	SB73/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB73	0.15-0.3	SB73/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB74	0-0.15	SB74/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB74	0.15-0.3	SB74/0.15-0.3	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB75	0-0.15	SB75/0.0-0.15	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB75	0.15-0.3	SB75/0.15-0.3	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB76	0-0.15	SB76/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB76	0.15-0.3	SB76/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB77	0-0.15	SB77/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB77	0.15-0.3	SB77/0.15-0.3	14/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB78	0-0.15	SB78/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB78	0.15-0.3	SB78/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB79	0-0.15	SB79/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB79	0.15-0.3	SB79/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB80	0-0.15	SB80/0.0-0.15	14/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB80	0.15-0.3	SB80/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB81	0-0.15	EI/QC17	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB81	0-0.15	EI/QC18	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB81	0-0.15	SB81/0.0-0.15	14/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB81	0.15-0.3	SB81/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB82	0-0.15	SB82/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB82	0.15-0.3	SB82/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB83	0-0.15	SB83/0.0-0.15	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB83	0.15-0.3	SB83/0.15-0.3	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB84	0-0.15	SB84/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB84	0.15-0.3	SB84/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.05	<0.5
SB85	0-0.15	SB85/0.0-0.15	14/09/2022	<0.05	0.09	<0.05	<0.05	<0.05	0.09	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB85	0.15-0.3	SB85/0.15-0.3	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB86	0-0.15	SB86/0.0-0.15	14/09/2022	<0.05	0.1	<0.05	<0.05	<0.05	0.1	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB86	0.15-0.3	SB86/0.15-0.3	14/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB87	0-0.15	SB87/0.0-0.15	14/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB87	0.15-0.3	SB87/0.15-0.3	14/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

		Halogenated Benzenes	Organochlorine Pesticides																									
		Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		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	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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil		10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development			0.06																								
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																									
SB88	0-0.15	SB88/0.0-0.15	14/09/2022	<0.05	0.15	<0.05	<0.05	<0.05	0.15	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB88	0.15-0.3	SB88/0.15-0.3	14/09/2022	<0.05	0.45	<0.05	<0.05	<0.05	0.45	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.45	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB89	0-0.15	SB89/0.0-0.15	14/09/2022	<0.05	0.18	<0.05	<0.05	<0.05	0.18	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.18	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB89	0.15-0.3	SB89/0.15-0.3	14/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB90	0-0.15	SB90/0.0-0.15	14/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB90	0.15-0.3	SB90/0.15-0.3	14/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.12	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB91	0-0.15	EI/QC19	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB91	0-0.15	EI/QC20	14/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB91	0-0.15	SB91/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB91	0.15-0.3	SB91/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB92	0-0.15	SB92/0.0-0.15	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB92	0.15-0.3	SB92/0.15-0.3	14/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB93	0-0.15	SB93/0.0-0.15	14/09/2022	<0.05	0.4	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB93	0.15-0.3	SB93/0.15-0.3	14/09/2022	<0.05	0.51	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	0.51	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB94	0-0.15	SB94/0.0-0.15	14/09/2022	<0.05	0.25	<0.05	<0.05	<0.05	0.25	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.25	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB94	0.15-0.3	SB94/0.15-0.3	14/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB95	0-0.15	SB95/0.0-0.15	14/09/2022	<0.05	0.19	<0.05	<0.05	<0.05	0.19	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.19	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB95	0.15-0.3	SB95/0.15-0.3	14/09/2022	<0.05	0.28	0.05	<0.05	<0.05	0.24	<0.1	-	-	<0.05	<0.05	<0.05	0.05	0.24	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB96	0-0.15	SB96/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB96	0.15-0.3	SB96/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB97	0-0.15	SB97/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB97	0.15-0.3	SB97/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB98	0-0.15	SB98/0.0-0.15	14/09/2022	<0.05	0.05	<0.05	<0.05	<0.05	0.05	<0.1	-	-	<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	<0.05	<0.5
SB98	0.15-0.3	SB98/0.15-0.3	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB99	0-0.15	SB99/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB99	0.15-0.3	SB99/0.15-0.3	14/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB100	0-0.15	SB100/0.0-0.15	14/09/2022	<0.05	0.1	<0.05	<0.05	<0.05	0.1	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB100	0.15-0.3	SB100/0.15-0.3	14/09/2022	<0.05	0.11	<0.05	<0.05	<0.05	0.11	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB101	0-0.15	EI/QC21	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB101	0-0.15	EI/QC22	14/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB101	0-0.15	SB101/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB101	0.15-0.3	SB101/0.15-0.3	14/09/2022	<0.05	0.05	<0.05	<0.05	<0.05	0.05	<0.1	-	-	<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	<0.05	<0.5
SB102	0-0.15	SB102/0.0-0.15	14/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB102	0.15-0.3	SB102/0.15-0.3	14/09/2022	<0.05	0.12	<0.05	<0.05	<0.05	0.12	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB103	0-0.15	SB103/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB103	0.15-0.3	SB103/0.15-0.3	16/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB104	0-0.15	SB104/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB104	0.15-0.3	SB104/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB105	0-0.15	SB105/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB105	0.15-0.3	SB105/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB106	0-0.15	SB106/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB106	0.15-0.3	SB106/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB107	0-0.15	SB107/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB107	0.15-0.3	SB107/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB108	0-0.15	SB108/0-0.15	16/09/2022	<0.05	0.1	<0.05	<0.05	<0.05	0.1	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB108	0.15-0.3	SB108/0.15-0.3	16/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB109	0-0.15	SB109/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB109	0.15-0.3	SB109/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5

	Halogenated Benzenes	Organochlorine Pesticides																										
	Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil	10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development		0.06																								

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																									
SB110	0-0.15	SB110/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB110	0.15-0.3	SB110/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB111	0-0.15	EI/QC23	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB111	0-0.15	EI/QC24	16/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB111	0-0.15	SB111/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB111	0.15-0.3	SB111/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB112	0-0.15	SB112/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB112	0.15-0.3	SB112/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB113	0-0.15	SB113/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB113	0.15-0.3	SB113/0.15-0.3	16/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB114	0-0.15	SB114/0-0.15	16/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB114	0.15-0.3	SB114/0.15-0.3	16/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB115	0-0.15	SB115/0-0.15	16/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB115	0.15-0.3	SB115/0.15-0.3	16/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB116	0-0.15	SB116/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB116	0.15-0.3	SB116/0.15-0.3	16/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB117	0-0.15	SB117/0-0.15	16/09/2022	<0.05	0.13	<0.05	<0.05	<0.05	0.13	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.13	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB117	0.15-0.3	SB117/0.15-0.3	16/09/2022	<0.05	0.23	<0.05	<0.05	<0.05	0.23	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.23	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB118	0-0.15	SB118/0-0.15	16/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB118	0.15-0.3	SB118/0.15-0.3	16/09/2022	<0.05	0.52	0.08	<0.05	<0.05	0.46	<0.1	-	-	<0.05	<0.05	<0.05	0.08	0.46	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB119	0-0.15	SB119/0-0.15	16/09/2022	<0.05	0.12	<0.05	<0.05	<0.05	0.12	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB119	0.15-0.3	SB119/0.15-0.3	16/09/2022	<0.05	0.2	0.07	<0.05	<0.05	0.13	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.13	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB120	0-0.15	SB120/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB120	0.15-0.3	SB120/0.15-0.3	16/09/2022	<0.05	0.06	<0.05	<0.05	<0.05	0.06	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB121	0-0.15	EI/QC25	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB121	0-0.15	EI/QC26	16/09/2022	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB121	0-0.15	SB121/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB121	0.15-0.3	SB121/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB122	0-0.15	SB122/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB122	0.15-0.3	SB122/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB123	0-0.15	SB123/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB123	0.15-0.3	SB123/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB124	0-0.15	SB124/0-0.15	16/09/2022	<0.05	0.05	<0.05	<0.05	<0.05	0.05	<0.1	-	-	<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	<0.05	<0.5
SB124	0.15-0.3	SB124/0.15-0.3	16/09/2022	<0.05	0.18	0.06	<0.05	<0.05	0.12	<0.1	-	-	<0.05	<0.05	<0.05	0.06	0.12	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB125	0-0.15	SB125/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB125	0.15-0.3	SB125/0.15-0.3	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB126	0-0.15	SB126/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB126	0.15-0.3	SB126/0.15-0.3	16/09/2022	<0.05	0.16	<0.05	<0.05	<0.05	0.16	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.16	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB127	0-0.15	SB127/0-0.15	16/09/2022	<0.05	0.23	<0.05	<0.05	<0.05	0.23	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.23	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB127	0.15-0.3	SB127/0.15-0.3	16/09/2022	<0.05	0.19	<0.05	<0.05	<0.05	0.19	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.19	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB128	0-0.15	SB128/0-0.15	16/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB128	0.15-0.3	SB128/0.15-0.3	16/09/2022	<0.05	0.28	<0.05	<0.05	<0.05	0.28	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.28	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB129	0-0.15	SB129/0-0.15	16/09/2022	<0.05	0.23	<0.05	<0.05	<0.05	0.23	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.23	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB129	0.15-0.3	SB129/0.15-0.3	16/09/2022	<0.05	0.19	<0.05	<0.05	<0.05	0.19	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.19	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB130	0-0.15	SB130/0-0.15	16/09/2022	<0.05	0.13	<0.05	<0.05	<0.05	0.13	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.13	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB130	0.15-0.3	SB130/0.15-0.3	16/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB131	0-0.15	EI/QC27	16/09/2022	<0.05	0.13	<0.05	<0.05	<0.05	0.13	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.13	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB131	0-0.15	EI/QC28	16/09/2022	<0.05	0.12	<0.05	<0.05	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-

	Halogenated Benzenes	Organochlorine Pesticides																										
	Hexachlorobenzene	OC Pesticides (Total)	4,4-DDE	a-BHC	Aldrin	Aldrin & Dieldrin	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	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	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil	10					6	50						240		270				10				6		300	20
WA Department of Primary Industries and Regional Development		0.06																								

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																									
SB131	0-0.15	SB131/0-0.15	16/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB131	0.15-0.3	SB131/0.15-0.3	16/09/2022	<0.05	0.29	<0.05	<0.05	<0.05	0.29	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.29	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB132	0-0.15	SB132/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB132	0.15-0.3	SB132/0.15-0.3	16/09/2022	<0.05	0.17	<0.05	<0.05	<0.05	0.17	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.17	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB133	0-0.15	SB133/0-0.15	16/09/2022	<0.05	0.21	<0.05	<0.05	<0.05	0.21	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.21	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB133	0.15-0.3	SB133/0.15-0.3	16/09/2022	<0.05	0.25	<0.05	<0.05	<0.05	0.25	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.25	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB134	0-0.15	SB134/0-0.15	16/09/2022	<0.05	0.22	<0.05	<0.05	<0.05	0.22	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.22	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB134	0.15-0.3	SB134/0.15-0.3	16/09/2022	<0.05	0.22	<0.05	<0.05	<0.05	0.22	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.22	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB135	0-0.15	SB135/0-0.15	16/09/2022	<0.05	0.17	<0.05	<0.05	<0.05	0.17	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.17	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB135	0.15-0.3	SB135/0.15-0.3	16/09/2022	<0.05	0.16	<0.05	<0.05	<0.05	0.16	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.16	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB136	0-0.15	SB136/0-0.15	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB136	0.15-0.3	SB136/0.15-0.3	16/09/2022	<0.05	0.1	<0.05	<0.05	<0.05	0.1	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB137	0-0.15	SB137/0-0.15	16/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB137	0.15-0.3	SB137/0.15-0.3	16/09/2022	<0.05	0.55	0.05	<0.05	<0.05	0.55	<0.1	-	-	<0.05	<0.05	<0.05	0.05	0.55	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB138	0-0.15	SB138/0-0.15	16/09/2022	<0.05	0.18	<0.05	<0.05	<0.05	0.18	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.18	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB138	0.15-0.3	SB138/0.15-0.3	16/09/2022	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB139	0-0.15	SB139/0-0.15	16/09/2022	<0.05	0.18	<0.05	<0.05	<0.05	0.18	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.18	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB139	0.15-0.3	SB139/0.15-0.3	16/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB140	0-0.15	SB140/0-0.15	16/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB140	0.15-0.3	SB140/0.15-0.3	16/09/2022	<0.05	0.24	<0.05	<0.05	<0.05	0.24	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.24	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB141	0-0.15	EI/QC29	16/09/2022	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<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	<0.05	<0.5
SB141	0-0.15	EI/QC30	16/09/2022	<0.05	0.19	<0.05	<0.05	<0.05	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
SB141	0-0.15	SB141/0-0.15	16/09/2022	<0.05	0.33	<0.05	<0.05	<0.05	0.33	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.33	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB141	0.15-0.3	SB141/0.15-0.3	16/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB142	0-0.15	SB142/0-0.15	16/09/2022	<0.05	0.38	<0.05	<0.05	<0.05	0.38	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.38	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB142	0.15-0.3	SB142/0.15-0.3	16/09/2022	<0.05	0.57	0.07	<0.05	<0.05	0.5	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.5	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB143	0-0.15	SB143/0-0.15	16/09/2022	<0.05	0.39	<0.05	<0.05	<0.05	0.39	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.39	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB143	0.15-0.3	SB143/0.15-0.3	16/09/2022	<0.05	0.43	<0.05	<0.05	<0.05	0.43	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.43	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB144	0-0.15	SB144/0-0.15	16/09/2022	<0.05	0.16	<0.05	<0.05	<0.05	0.16	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.16	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB144	0.15-0.3	SB144/0.15-0.3	16/09/2022	<0.05	0.16	<0.05	<0.05	<0.05	0.16	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.16	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB145	0-0.15	SB145/0-0.15	16/09/2022	<0.05	0.26	<0.05	<0.05	<0.05	0.26	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB145	0.15-0.3	SB145/0.15-0.3	16/09/2022	<0.05	0.24	<0.05	<0.05	<0.05	0.24	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.24	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB146	0-0.15	SB146/0-0.15	16/09/2022	<0.05	0.2	<0.05	<0.05	<0.05	0.2	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB146	0.15-0.3	SB146/0.15-0.3	16/09/2022	<0.05	0.14	<0.05	<0.05	<0.05	0.14	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB147	0-0.15	SB147/0-0.15	16/09/2022	<0.05	0.37	<0.05	<0.05	<0.05	0.37	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.37	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB147	0.15-0.3	SB147/0.15-0.3	16/09/2022	<0.05	0.34	<0.05	<0.05	<0.05	0.34	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.34	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB148	0-0.15	SB148/0-0.15	16/09/2022	<0.05	0.24	<0.05	<0.05	<0.05	0.24	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.24	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB148	0.15-0.3	SB148/0.15-0.3	16/09/2022	<0.05	0.3	<0.05	<0.05	<0.05	0.3	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB149	0-0.15	SB149/0-0.15	16/09/2022	<0.05	0.1	<0.05	<0.05	<0.05	0.1	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB149	0.15-0.3	SB149/0.15-0.3	16/09/2022	<0.05	0.07	<0.05	<0.05	<0.05	0.07	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB150	0-0.15	SB150/0-0.15	16/09/2022	<0.05	0.65	0.08	<0.05	<0.05	0.57	<0.1	-	-	<0.05	<0.05	<0.05	0.08	0.57	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
SB150	0.15-0.3	SB150/0.15-0.3	16/09/2022	<0.05	0.23	<0.05	<0.05	<0.05	0.23	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.23	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

	Halogenated Benzenes	Inorganics	Organochlorine Pesticides																
	Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
	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	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	1	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 Fill material upper limit																		
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit						1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit						1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit						4.8		16						50				

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																	
SB03	0-0.15	SB03/0-0.15	12/09/2022	<0.05	20	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB03	0.15-0.3	SB03/0.15-0.3	12/09/2022	<0.05	16	<0.05	<0.05	<0.05	0.45	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.45	-	<0.05	<0.05
SB118	0-0.15	SB118/0-0.15	16/09/2022	<0.05	18	<0.05	<0.05	<0.05	0.2	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.2	-	<0.05	<0.05
SB118	0.15-0.3	SB118/0.15-0.3	16/09/2022	<0.05	12	0.08	<0.05	<0.05	0.46	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.08	0.46	-	<0.05	<0.05
SB137	0-0.15	SB137/0-0.15	16/09/2022	<0.05	15	<0.05	<0.05	<0.05	0.14	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05
SB137	0.15-0.3	SB137/0.15-0.3	16/09/2022	<0.05	12	0.05	<0.05	<0.05	0.55	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.05	0.55	-	<0.05	<0.05
SB142	0-0.15	SB142/0-0.15	16/09/2022	<0.05	14	<0.05	<0.05	<0.05	0.38	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.38	-	<0.05	<0.05
SB142	0.15-0.3	SB142/0.15-0.3	16/09/2022	<0.05	14	0.07	<0.05	<0.05	0.5	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.5	-	<0.05	<0.05
SB150	0-0.15	SB150/0-0.15	16/09/2022	<0.05	12	0.08	<0.05	<0.05	0.57	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.08	0.57	-	<0.05	<0.05
SB150	0.15-0.3	SB150/0.15-0.3	16/09/2022	<0.05	11	<0.05	<0.05	<0.05	0.23	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.23	-	<0.05	<0.05
SB201	0-0.15	QC01/100223	10/02/2023	<0.05	26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB201	0-0.15	QC02/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
SB201	0-0.15	SB201/0-0.15	10/02/2023	<0.05	24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB201	0.15-0.3	SB201/0.15-0.3	10/02/2023	<0.05	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB202	0-0.15	SB202/0-0.15	10/02/2023	<0.05	17	<0.05	<0.05	<0.05	0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.05	-	<0.05	<0.05
SB202	0.15-0.3	SB202/0.15-0.3	10/02/2023	<0.05	17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB203	0-0.15	SB203/0-0.15	10/02/2023	<0.05	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB203	0.15-0.3	SB203/0.15-0.3	10/02/2023	<0.05	22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB204	0-0.15	SB204/0-0.15	10/02/2023	<0.05	24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB204	0.15-0.3	SB204/0.15-0.3	10/02/2023	<0.05	24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB205	0-0.15	SB205/0-0.15	10/02/2023	<0.05	8.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB205	0.15-0.3	SB205/0.15-0.3	10/02/2023	<0.05	4.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB206	0-0.15	SB206/0-0.15	10/02/2023	<0.05	5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB206	0.15-0.3	SB206/0.15-0.3	10/02/2023	<0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB207	0-0.15	SB207/0-0.15	10/02/2023	<0.05	21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB207	0.15-0.3	SB207/0.15-0.3	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB208	0-0.15	SB208/0-0.15	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05

				Halogenated Benzenes	Inorganics	Organochlorine Pesticides															
				Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
				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	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	1	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 Fill material upper limit																					
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit									1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit									4.8		16						50				
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																		
SB208	0.15-0.3	SB208/0.15-0.3	10/02/2023	<0.05	6.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB209	0-0.15	SB209/0-0.15	10/02/2023	<0.05	5.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB209	0.15-0.3	SB209/0.15-0.3	10/02/2023	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB210	0-0.15	SB210/0-0.15	10/02/2023	<0.05	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB210	0.15-0.3	SB210/0.15-0.3	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB211	0-0.15	QC03/100223	10/02/2023	<0.05	4.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB211	0-0.15	QC04/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
SB211	0-0.15	SB211/0-0.15	10/02/2023	<0.05	4.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB211	0.15-0.3	SB211/0.15-0.3	10/02/2023	<0.05	4.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB212	0-0.15	SB212/0-0.15	10/02/2023	<0.05	7.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB212	0.15-0.3	SB212/0.15-0.3	10/02/2023	<0.05	5.6	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB213	0-0.15	SB213/0-0.15	10/02/2023	<0.05	4.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB213	0.15-0.3	SB213/0.15-0.3	10/02/2023	<0.05	2.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB214	0-0.15	SB214/0-0.15	10/02/2023	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB214	0.15-0.3	SB214/0.15-0.3	10/02/2023	<0.05	9.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB215	0-0.15	SB215/0-0.15	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB215	0.15-0.3	SB215/0.15-0.3	10/02/2023	<0.05	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB216	0-0.15	SB216/0-0.15	10/02/2023	<0.05	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB216	0.15-0.3	SB216/0.15-0.3	10/02/2023	<0.05	9.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB217	0-0.15	SB217/0-0.15	10/02/2023	<0.05	8.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB217	0.15-0.3	SB217/0.15-0.3	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB218	0-0.15	SB218/0-0.15	10/02/2023	<0.05	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB218	0.15-0.3	SB218/0.15-0.3	10/02/2023	<0.05	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB219	0-0.15	SB219/0-0.15	10/02/2023	<0.05	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB219	0.15-0.3	SB219/0.15-0.3	10/02/2023	<0.05	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB220	0-0.15	SB220/0-0.15	10/02/2023	<0.05	9.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB220	0.15-0.3	SB220/0.15-0.3	10/02/2023	<0.05	7.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05

			Halogenated Benzenes	Inorganics	Organochlorine Pesticides																
			Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
			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	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	1	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 Fill material upper limit																				
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit								1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit								1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit								4.8		16						50				
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																	
SB221	0-0.15	QC05/100223	10/02/2023	<0.05	8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB221	0-0.15	QC06/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
SB221	0-0.15	SB221/0-0.15	10/02/2023	<0.05	9.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB221	0.15-0.3	SB221/0.15-0.3	10/02/2023	<0.05	9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB222	0-0.15	SB222/0-0.15	10/02/2023	<0.05	3.9	0.19	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.19	<0.05	-	<0.05	<0.05
SB222	0.15-0.3	SB222/0.15-0.3	10/02/2023	<0.05	5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB223	0-0.15	SB223/0-0.15	10/02/2023	<0.05	5.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.05	<0.05	-	<0.05	<0.05
SB223	0.15-0.3	SB223/0.15-0.3	10/02/2023	<0.05	7.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB224	0-0.15	SB224/0-0.15	10/02/2023	<0.05	8.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB224	0.15-0.3	SB224/0.15-0.3	10/02/2023	<0.05	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB225	0-0.15	SB225/0-0.15	10/02/2023	<0.05	7.8	<0.05	<0.05	<0.05	0.13	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.13	-	<0.05	<0.05
SB225	0.15-0.3	SB225/0.15-0.3	10/02/2023	<0.05	11	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB226	0-0.15	SB226/0-0.15	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB226	0.15-0.3	SB226/0.15-0.3	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	0.26	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.26	-	<0.05	<0.05
SB227	0-0.15	SB227/0-0.15	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	0.1	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05
SB227	0.15-0.3	SB227/0.15-0.3	10/02/2023	<0.05	19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB228	0-0.15	SB228/0-0.15	10/02/2023	<0.05	18	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB228	0.15-0.3	SB228/0.15-0.3	10/02/2023	<0.05	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB229	0-0.15	SB229/0-0.15	10/02/2023	<0.05	17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB229	0.15-0.3	SB229/0.15-0.3	10/02/2023	<0.05	19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB230	0-0.15	SB230/0-0.15	10/02/2023	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB230	0.15-0.3	SB230/0.15-0.3	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB231	0-0.15	QC07/100223	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB231	0-0.15	QC08/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
SB231	0-0.15	SB231/0-0.15	10/02/2023	<0.05	4.7	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB231	0.15-0.3	SB231/0.15-0.3	10/02/2023	<0.05	4.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB232	0-0.15	SB232/0-0.15	10/02/2023	<0.05	9.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05

				Halogenated Benzenes	Inorganics	Organochlorine Pesticides															
				Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
				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	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	1	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 Fill material upper limit																					
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit									1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit									4.8		16						50				
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																		
SB232	0.15-0.3	SB232/0.15-0.3	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB233	0-0.15	SB233/0-0.15	10/02/2023	<0.05	5.1	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB233	0.15-0.3	SB233/0.15-0.3	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05
SB234	0-0.15	SB234/0-0.15	10/02/2023	<0.05	18	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05
SB234	0.15-0.3	SB234/0.15-0.3	10/02/2023	<0.05	16	<0.05	<0.05	<0.05	0.06	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05
SB235	0-0.15	SB235/0-0.15	10/02/2023	<0.05	17	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB235	0.15-0.3	SB235/0.15-0.3	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB236	0-0.15	SB236/0-0.15	10/02/2023	<0.05	10	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05
SB236	0.15-0.3	SB236/0.15-0.3	10/02/2023	<0.05	9.1	<0.05	<0.05	<0.05	0.06	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05
SB237	0-0.15	SB237/0-0.15	10/02/2023	<0.05	9.3	<0.05	<0.05	<0.05	0.06	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05
SB237	0.15-0.3	SB237/0.15-0.3	10/02/2023	<0.05	9.9	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB238	0-0.15	SB238/0-0.15	10/02/2023	<0.05	9.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB238	0.15-0.3	SB238/0.15-0.3	10/02/2023	<0.05	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB239	0-0.15	SB239/0-0.15	10/02/2023	<0.05	4.7	0.07	<0.05	<0.05	0.27	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.27	-	<0.05	<0.05
SB239	0.15-0.3	SB239/0.15-0.3	10/02/2023	<0.05	7.6	<0.05	<0.05	<0.05	0.06	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05
SB240	0-0.15	SB240/0-0.15	10/02/2023	<0.05	4.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB240	0.15-0.3	SB240/0.15-0.3	10/02/2023	<0.05	6.4	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB241	0-0.15	QC09/100223	10/02/2023	<0.05	8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB241	0-0.15	QC10/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.15	<0.05	<0.05	<0.05
SB241	0-0.15	SB241/0-0.15	10/02/2023	<0.05	5.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB241	0.15-0.3	SB241/0.15-0.3	10/02/2023	<0.05	5.7	<0.05	<0.05	<0.05	0.06	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05
SB242	0-0.15	SB242/0-0.15	10/02/2023	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB242	0.15-0.3	SB242/0.15-0.3	10/02/2023	<0.05	8.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB243	0-0.15	SB243/0-0.15	10/02/2023	<0.05	4.9	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05
SB243	0.15-0.3	SB243/0.15-0.3	10/02/2023	<0.05	8.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB244	0-0.15	SB244/0-0.15	10/02/2023	<0.05	4.5	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05
SB244	0.15-0.3	SB244/0.15-0.3	10/02/2023	<0.05	9.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05

			Halogenated Benzenes	Inorganics	Organochlorine Pesticides																
			Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
			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	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	1	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 Fill material upper limit																				
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit								1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit								1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit								4.8		16						50				
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**																	
SB245	0-0.15	SB245/0-0.15	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB245	0.15-0.3	SB245/0.15-0.3	10/02/2023	<0.05	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB246	0-0.15	SB246/0-0.15	10/02/2023	<0.05	13	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB246	0.15-0.3	SB246/0.15-0.3	10/02/2023	<0.05	18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB247	0-0.15	SB247/0-0.15	10/02/2023	<0.05	21	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB247	0.15-0.3	SB247/0.15-0.3	10/02/2023	<0.05	22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB248	0-0.15	SB248/0-0.15	10/02/2023	<0.05	5.7	<0.05	<0.05	<0.05	0.1	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05
SB248	0.15-0.3	SB248/0.15-0.3	10/02/2023	<0.05	9.1	<0.05	<0.05	<0.05	0.12	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05
SB249	0-0.15	SB249/0-0.15	10/02/2023	<0.05	15	<0.05	<0.05	<0.05	0.11	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05
SB249	0.15-0.3	SB249/0.15-0.3	10/02/2023	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB250	0-0.15	SB250/0-0.15	10/02/2023	<0.05	2.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB250	0.15-0.3	SB250/0.15-0.3	10/02/2023	<0.05	3	<0.05	<0.05	<0.05	0.1	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05
SB251	0-0.15	QC11/100223	10/02/2023	<0.05	2.4	<0.05	<0.05	<0.05	0.13	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.13	-	<0.05	<0.05
SB251	0-0.15	QC12/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.15	<0.05	<0.05	<0.05
SB251	0-0.15	SB251/0-0.15	10/02/2023	<0.05	2.8	<0.05	<0.05	<0.05	0.14	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05
SB251	0.15-0.3	SB251/0.15-0.3	10/02/2023	<0.05	2.2	<0.05	<0.05	<0.05	0.06	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.06	-	<0.05	<0.05
SB252	0-0.15	SB252/0-0.15	10/02/2023	<0.05	7.8	0.39	<0.05	<0.05	2.1	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.39	2.1	-	<0.05	<0.05
SB252	0.15-0.3	SB252/0.15-0.3	10/02/2023	<0.05	2.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB253	0-0.15	SB253/0-0.15	10/02/2023	<0.05	5.9	0.12	<0.05	<0.05	0.76	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.12	0.76	-	<0.05	<0.05
SB253	0.15-0.3	SB253/0.15-0.3	10/02/2023	<0.05	3.5	<0.05	<0.05	<0.05	0.12	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.12	-	<0.05	<0.05
SB254	0-0.15	SB254/0-0.15	10/02/2023	<0.05	4.1	0.07	<0.05	<0.05	0.43	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.43	-	<0.05	<0.05
SB254	0.15-0.3	SB254/0.15-0.3	10/02/2023	<0.05	7.6	<0.05	<0.05	<0.05	0.16	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.16	-	<0.05	<0.05
SB255	0-0.15	SB255/0-0.15	10/02/2023	<0.05	3.5	1.3	<0.05	<0.05	7.4	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	1.3	7.4	-	<0.05	<0.05
SB255	0.15-0.3	SB255/0.15-0.3	10/02/2023	<0.05	8.6	<0.05	<0.05	<0.05	0.08	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.08	-	<0.05	<0.05
SB256	0-0.15	SB256/0-0.15	10/02/2023	<0.05	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB256	0.15-0.3	SB256/0.15-0.3	10/02/2023	<0.05	3.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB257	0-0.15	SB257/0-0.15	10/02/2023	<0.05	7.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05

	Halogenated Benzenes	Inorganics	Organochlorine Pesticides																
	Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
	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	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	1	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 Fill material upper limit																		
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit						1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit						1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit						4.8		16						50				

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																
SB257	0.15-0.3	SB257/0.15-0.3	10/02/2023	<0.05	7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB258	0-0.15	SB258/0-0.15	10/02/2023	<0.05	11	<0.05	<0.05	<0.05	0.11	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.11	-	<0.05	<0.05
SB258	0.15-0.3	SB258/0.15-0.3	10/02/2023	<0.05	18	<0.05	<0.05	<0.05	0.07	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.05
SB259	0-0.15	SB259/0-0.15	10/02/2023	<0.05	5.1	<0.05	<0.05	<0.05	0.1	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.1	-	<0.05	<0.05
SB259	0.15-0.3	SB259/0.15-0.3	10/02/2023	<0.05	8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB260	0-0.15	SB260/0-0.15	10/02/2023	<0.05	9.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB260	0.15-0.3	SB260/0.15-0.3	10/02/2023	<0.05	3.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB261	0-0.15	QC13/100223	10/02/2023	<0.05	4.5	<0.05	<0.05	<0.05	0.18	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.18	-	<0.05	<0.05
SB261	0-0.15	QC14/100223	10/02/2023	<0.05	-	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	0.05	<0.05	<0.05	<0.05
SB261	0-0.15	SB261/0-0.15	10/02/2023	<0.05	5.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB261	0.15-0.3	SB261/0.15-0.3	10/02/2023	<0.05	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB262	0-0.15	SB262/0-0.15	10/02/2023	<0.05	7.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB262	0.15-0.3	SB262/0.15-0.3	10/02/2023	<0.05	6.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB263	0-0.15	SB263/0-0.15	10/02/2023	<0.05	18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB263	0.15-0.3	SB263/0.15-0.3	10/02/2023	<0.05	18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB264	0-0.15	SB264/0-0.15	10/02/2023	<0.05	7.8	<0.05	<0.05	<0.05	0.14	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05
SB264	0.15-0.3	SB264/0.15-0.3	10/02/2023	<0.05	4.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB265	0-0.15	SB265/0-0.15	10/02/2023	<0.05	5.9	<0.05	<0.05	<0.05	0.18	<0.05	<0.1	-	-	<0.05	<0.05	0.11	0.11	0.18	-	<0.05	<0.05
SB265	0.15-0.3	SB265/0.15-0.3	10/02/2023	<0.05	17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB266	0-0.15	SB266/0-0.15	10/02/2023	<0.05	5.8	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.09	-	<0.05	<0.05
SB266	0.15-0.3	SB266/0.15-0.3	10/02/2023	<0.05	4.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB267	0-0.15	SB267/0-0.15	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB267	0.15-0.3	SB267/0.15-0.3	10/02/2023	<0.05	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB268	0-0.15	SB268/0-0.15	10/02/2023	<0.05	14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB268	0.15-0.3	SB268/0.15-0.3	10/02/2023	<0.05	21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB269	0-0.15	SB269/0-0.15	10/02/2023	<0.05	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB269	0.15-0.3	SB269/0.15-0.3	10/02/2023	<0.05	22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05

	Halogenated Benzenes	Inorganics	Organochlorine Pesticides																
	Hexachlorobenzene	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II
	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	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	1	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 Fill material upper limit																		
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit						1.2		4						50				
EPA Vic IWRG1828.2 Category C upper limit						1.2		4						50				
EPA Vic IWRG1828.2 Category B upper limit						4.8		16						50				

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time																	
SB270	0-0.15	SB270/0-0.15	10/02/2023	<0.05	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB270	0.15-0.3	SB270/0.15-0.3	10/02/2023	<0.05	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB271	0-0.15	QC01/010323	1/03/2023	<0.05	2.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB271	0-0.15	QC02/010323	1/03/2023	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
SB271	0-0.15	SB271/0-0.15	1/03/2023	<0.05	2.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB271	0.15-0.3	SB271/0.15-0.3	1/03/2023	<0.05	2.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB273	0-0.15	SB273/0-0.15	1/03/2023	<0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB273	0.15-0.3	SB273/0.15-0.3	1/03/2023	<0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB275	0-0.15	SB275/0-0.15	1/03/2023	<0.05	2.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB275	0.15-0.3	SB275/0.15-0.3	1/03/2023	<0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB277	0-0.15	SB277/0-0.15	1/03/2023	<0.05	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB277	0.15-0.3	SB277/0.15-0.3	1/03/2023	<0.05	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
SB43	0-0.15	SB43/0-0.15	12/09/2022	<0.05	16	0.11	<0.05	<0.05	0.45	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.11	0.45	-	<0.05	<0.05
SB43	0.15-0.3	SB43/0.15-0.3	12/09/2022	<0.05	15	0.32	<0.05	<0.05	1	<0.05	<0.1	-	-	<0.05	<0.05	0.13	0.45	1	-	<0.05	<0.05
SB44	0-0.15	SB44/0-0.15	12/09/2022	<0.05	16	<0.05	<0.05	<0.05	0.22	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.22	-	<0.05	<0.05
SB44	0.15-0.3	SB44/0.15-0.3	12/09/2022	<0.05	15	<0.05	<0.05	<0.05	1.6	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	1.6	-	<0.05	<0.05
SB45	0-0.15	SB45/0-0.15	12/09/2022	<0.05	15	<0.05	<0.05	<0.05	0.8	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.8	-	<0.05	<0.05
SB45	0.15-0.3	SB45/0.15-0.3	12/09/2022	<0.05	15	<0.05	<0.05	<0.05	0.86	<0.05	<0.1	-	-	<0.05	0.06	<0.05	0.06	0.86	-	<0.05	<0.05
SB46	0-0.15	SB46/0-0.15	12/09/2022	<0.05	16	<0.05	<0.05	<0.05	0.49	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.49	-	<0.05	<0.05
SB46	0.15-0.3	SB46/0.15-0.3	12/09/2022	<0.05	18	0.07	<0.05	<0.05	0.26	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.07	0.26	-	<0.05	<0.05
SB64	0-0.15	SB64/0.0-0.15	14/09/2022	<0.05	12	<0.05	<0.05	<0.05	0.46	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.46	-	<0.05	<0.05
SB64	0.15-0.3	SB64/0.15-0.3	14/09/2022	<0.05	12	0.05	<0.05	<0.05	0.52	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	0.05	0.52	-	<0.05	<0.05
SB88	0-0.15	SB88/0.0-0.15	14/09/2022	<0.05	15	<0.05	<0.05	<0.05	0.15	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.15	-	<0.05	<0.05
SB88	0.15-0.3	SB88/0.15-0.3	14/09/2022	<0.05	12	<0.05	<0.05	<0.05	0.45	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	0.45	-	<0.05	<0.05

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB03	0-0.15	SB03/0-0.15	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB03	0.15-0.3	SB03/0.15-0.3	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.45	<0.1
SB118	0-0.15	SB118/0-0.15	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.2	<0.1
SB118	0.15-0.3	SB118/0.15-0.3	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.54	<0.1
SB137	0-0.15	SB137/0-0.15	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.14	<0.1
SB137	0.15-0.3	SB137/0.15-0.3	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.6	<0.1
SB142	0-0.15	SB142/0-0.15	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.38	<0.1
SB142	0.15-0.3	SB142/0.15-0.3	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.57	<0.1
SB150	0-0.15	SB150/0-0.15	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.65	<0.1
SB150	0.15-0.3	SB150/0.15-0.3	16/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.23	<0.1
SB201	0-0.15	QC01/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB201	0-0.15	QC02/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB201	0-0.15	SB201/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB201	0.15-0.3	SB201/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB202	0-0.15	SB202/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB202	0.15-0.3	SB202/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB203	0-0.15	SB203/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB203	0.15-0.3	SB203/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB204	0-0.15	SB204/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB204	0.15-0.3	SB204/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB205	0-0.15	SB205/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB205	0.15-0.3	SB205/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB206	0-0.15	SB206/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB206	0.15-0.3	SB206/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB207	0-0.15	SB207/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB207	0.15-0.3	SB207/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB208	0-0.15	SB208/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB208	0.15-0.3	SB208/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB209	0-0.15	SB209/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB209	0.15-0.3	SB209/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB210	0-0.15	SB210/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB210	0.15-0.3	SB210/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB211	0-0.15	QC03/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB211	0-0.15	QC04/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB211	0-0.15	SB211/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB211	0.15-0.3	SB211/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB212	0-0.15	SB212/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB212	0.15-0.3	SB212/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB213	0-0.15	SB213/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB213	0.15-0.3	SB213/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB214	0-0.15	SB214/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB214	0.15-0.3	SB214/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB215	0-0.15	SB215/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB215	0.15-0.3	SB215/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB216	0-0.15	SB216/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB216	0.15-0.3	SB216/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB217	0-0.15	SB217/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB217	0.15-0.3	SB217/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB218	0-0.15	SB218/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB218	0.15-0.3	SB218/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB219	0-0.15	SB219/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB219	0.15-0.3	SB219/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB220	0-0.15	SB220/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB220	0.15-0.3	SB220/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB221	0-0.15	QC05/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB221	0-0.15	QC06/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB221	0-0.15	SB221/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB221	0.15-0.3	SB221/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB222	0-0.15	SB222/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.19	<0.1
SB222	0.15-0.3	SB222/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB223	0-0.15	SB223/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB223	0.15-0.3	SB223/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB224	0-0.15	SB224/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB224	0.15-0.3	SB224/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB225	0-0.15	SB225/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.13	<0.1
SB225	0.15-0.3	SB225/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB226	0-0.15	SB226/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB226	0.15-0.3	SB226/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.26	<0.1
SB227	0-0.15	SB227/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.1	<0.1
SB227	0.15-0.3	SB227/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB228	0-0.15	SB228/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB228	0.15-0.3	SB228/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB229	0-0.15	SB229/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB229	0.15-0.3	SB229/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB230	0-0.15	SB230/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB230	0.15-0.3	SB230/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB231	0-0.15	QC07/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB231	0-0.15	QC08/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB231	0-0.15	SB231/0-0.15	10/02/2023	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.13	<0.1
SB231	0.15-0.3	SB231/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB232	0-0.15	SB232/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB232	0.15-0.3	SB232/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB233	0-0.15	SB233/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB233	0.15-0.3	SB233/0.15-0.3	10/02/2023	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.17	<0.1
SB234	0-0.15	SB234/0-0.15	10/02/2023	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.16	<0.1
SB234	0.15-0.3	SB234/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB235	0-0.15	SB235/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB235	0.15-0.3	SB235/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB236	0-0.15	SB236/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB236	0.15-0.3	SB236/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB237	0-0.15	SB237/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB237	0.15-0.3	SB237/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB238	0-0.15	SB238/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB238	0.15-0.3	SB238/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB239	0-0.15	SB239/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.34	<0.1
SB239	0.15-0.3	SB239/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB240	0-0.15	SB240/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB240	0.15-0.3	SB240/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB241	0-0.15	QC09/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB241	0-0.15	QC10/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB241	0-0.15	SB241/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB241	0.15-0.3	SB241/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB242	0-0.15	SB242/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB242	0.15-0.3	SB242/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB243	0-0.15	SB243/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB243	0.15-0.3	SB243/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB244	0-0.15	SB244/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB244	0.15-0.3	SB244/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB245	0-0.15	SB245/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB245	0.15-0.3	SB245/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB246	0-0.15	SB246/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB246	0.15-0.3	SB246/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB247	0-0.15	SB247/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB247	0.15-0.3	SB247/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB248	0-0.15	SB248/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.1	<0.1
SB248	0.15-0.3	SB248/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.12	<0.1
SB249	0-0.15	SB249/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.11	<0.1
SB249	0.15-0.3	SB249/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB250	0-0.15	SB250/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB250	0.15-0.3	SB250/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.1	<0.1
SB251	0-0.15	QC11/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.13	<0.1
SB251	0-0.15	QC12/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB251	0-0.15	SB251/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.14	<0.1
SB251	0.15-0.3	SB251/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB252	0-0.15	SB252/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	2.49	<0.1
SB252	0.15-0.3	SB252/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB253	0-0.15	SB253/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.88	<0.1
SB253	0.15-0.3	SB253/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.12	<0.1
SB254	0-0.15	SB254/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.5	<0.1
SB254	0.15-0.3	SB254/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.16	<0.1
SB255	0-0.15	SB255/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	8.7	<0.1
SB255	0.15-0.3	SB255/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB256	0-0.15	SB256/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB256	0.15-0.3	SB256/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB257	0-0.15	SB257/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB257	0.15-0.3	SB257/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB258	0-0.15	SB258/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.11	<0.1
SB258	0.15-0.3	SB258/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB259	0-0.15	SB259/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.1	<0.1
SB259	0.15-0.3	SB259/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB260	0-0.15	SB260/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB260	0.15-0.3	SB260/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB261	0-0.15	QC13/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.18	<0.1
SB261	0-0.15	QC14/100223	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB261	0-0.15	SB261/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB261	0.15-0.3	SB261/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB262	0-0.15	SB262/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB262	0.15-0.3	SB262/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB263	0-0.15	SB263/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB263	0.15-0.3	SB263/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB264	0-0.15	SB264/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.14	<0.1
SB264	0.15-0.3	SB264/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB265	0-0.15	SB265/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.29	<0.1
SB265	0.15-0.3	SB265/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB266	0-0.15	SB266/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB266	0.15-0.3	SB266/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB267	0-0.15	SB267/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB267	0.15-0.3	SB267/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB268	0-0.15	SB268/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB268	0.15-0.3	SB268/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB269	0-0.15	SB269/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB269	0.15-0.3	SB269/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1

											Pesticides	
				Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Organochlorine pesticides	Other organochlorine pesticides
				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	0.5	0.1	0.1
EPA Vic IWRG1828.2 Fill material upper limit													1	
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit									1.2					10
EPA Vic IWRG1828.2 Category C upper limit									1.2					10
EPA Vic IWRG1828.2 Category B upper limit									4.8					50
LocCode	**Sample_Depth_Range**	**Field_ID**	**Sampled_Date-Time**											
SB270	0-0.15	SB270/0-0.15	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB270	0.15-0.3	SB270/0.15-0.3	10/02/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB271	0-0.15	QC01/010323	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB271	0-0.15	QC02/010323	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-
SB271	0-0.15	SB271/0-0.15	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB271	0.15-0.3	SB271/0.15-0.3	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB273	0-0.15	SB273/0-0.15	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB273	0.15-0.3	SB273/0.15-0.3	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB275	0-0.15	SB275/0-0.15	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB275	0.15-0.3	SB275/0.15-0.3	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB277	0-0.15	SB277/0-0.15	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB277	0.15-0.3	SB277/0.15-0.3	1/03/2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
SB43	0-0.15	SB43/0-0.15	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.56	<0.1
SB43	0.15-0.3	SB43/0.15-0.3	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	1.45	<0.1
SB44	0-0.15	SB44/0-0.15	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.22	<0.1
SB44	0.15-0.3	SB44/0.15-0.3	12/09/2022	<0.05	0.71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	2.31	0.71
SB45	0-0.15	SB45/0-0.15	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.8	<0.1
SB45	0.15-0.3	SB45/0.15-0.3	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.92	<0.1
SB46	0-0.15	SB46/0-0.15	12/09/2022	<0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.67	0.18
SB46	0.15-0.3	SB46/0.15-0.3	12/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.33	<0.1
SB64	0-0.15	SB64/0.0-0.15	14/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.46	<0.1
SB64	0.15-0.3	SB64/0.15-0.3	14/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.57	<0.1
SB88	0-0.15	SB88/0.0-0.15	14/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.15	<0.1
SB88	0.15-0.3	SB88/0.15-0.3	14/09/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	0.45	<0.1

	Aldrin & Dieldrin
	mg/L
EQL	0.01
EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit	0.015
EPA Vic IWRG1828.2 Category C upper limit	0.03
EPA Vic IWRG1828.2 Category B upper limit	0.12

LocCode	Sample_Depth_Range	Field_ID	Sampled_Date-Time	
SB255	0-0.15	SB255/0-0.15	10/02/2023	0.0006

Appendix A Current Certificate of Title

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

VOLUME 10978 FOLIO 324

Security no : 124075729850Y
Produced 16/01/2019 11:50 AM

LAND DESCRIPTION

Lot 1 on Title Plan 198964M.
PARENT TITLE Volume 09105 Folio 585
Created by instrument AE734204J 17/11/2006

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
CURLEWIS BELLARINE PTY LTD of UNIT 11 41 SABRE DRIVE PORT MELBOURNE VIC 3207
AQ666908S 25/01/2018

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 TP198964M 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: 91-125 CORIYULE ROAD CURLEWIS VIC 3222

DOCUMENT END

Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Land Use Victoria.

Document Type	**Plan**
Document Identification	**TP198964M**
Number of Pages (excluding this cover sheet)	**1**
Document Assembled	**16/01/2019 12:22**

TITLE PLAN		EDITION 1	TP 198964M

Location of Land

Parish: BELLARINE
Township:
Section:
Crown Allotment:
Crown Portion: 3(PT)

Last Plan Reference: LP10309
Derived From: VOL 9105 FOL 585
Depth Limitation: NIL

Notations

ANY REFERENCE TO MAP IN THE TEXT MEANS THE DIAGRAM SHOWN ON THIS TITLE PLAN

Description of Land / Easement Information

ALL THAT piece of land delineated and coloured red on the map hereon being ~~part of~~ Lot 15 on Plan of Subdivision No.10309 and being part of Crown Portion 3 Parish of Bellarine County of Grant Together with a right of carriage way over Coryule Road coloured brown on the said Plan of Subdivision

THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT
COMPILED: 23/11/2000
VERIFIED: SO'C

COLOUR CODE
R = RED

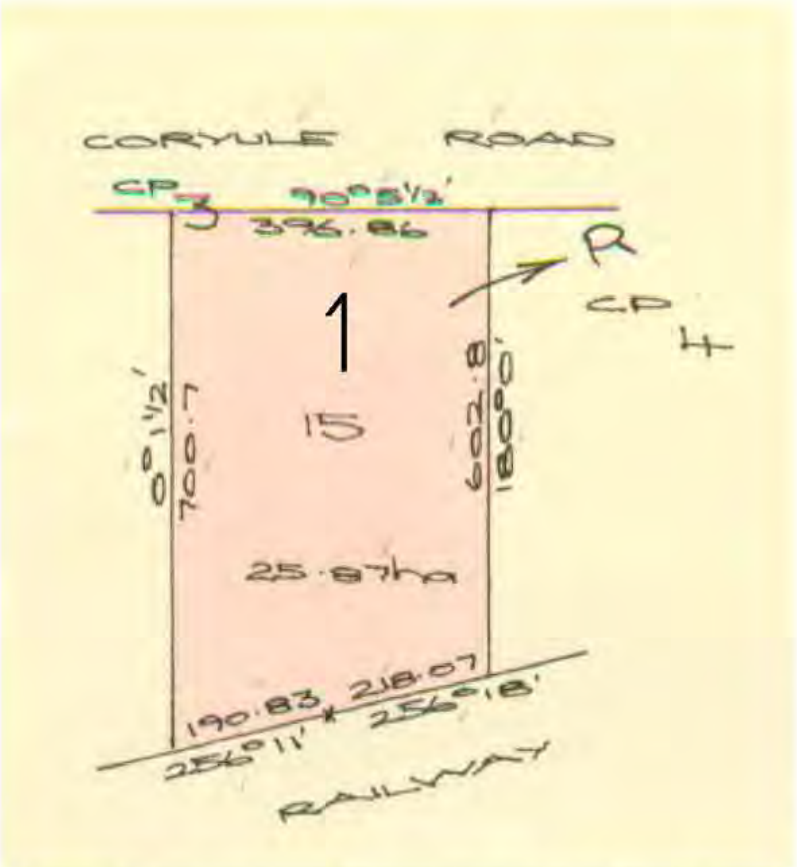
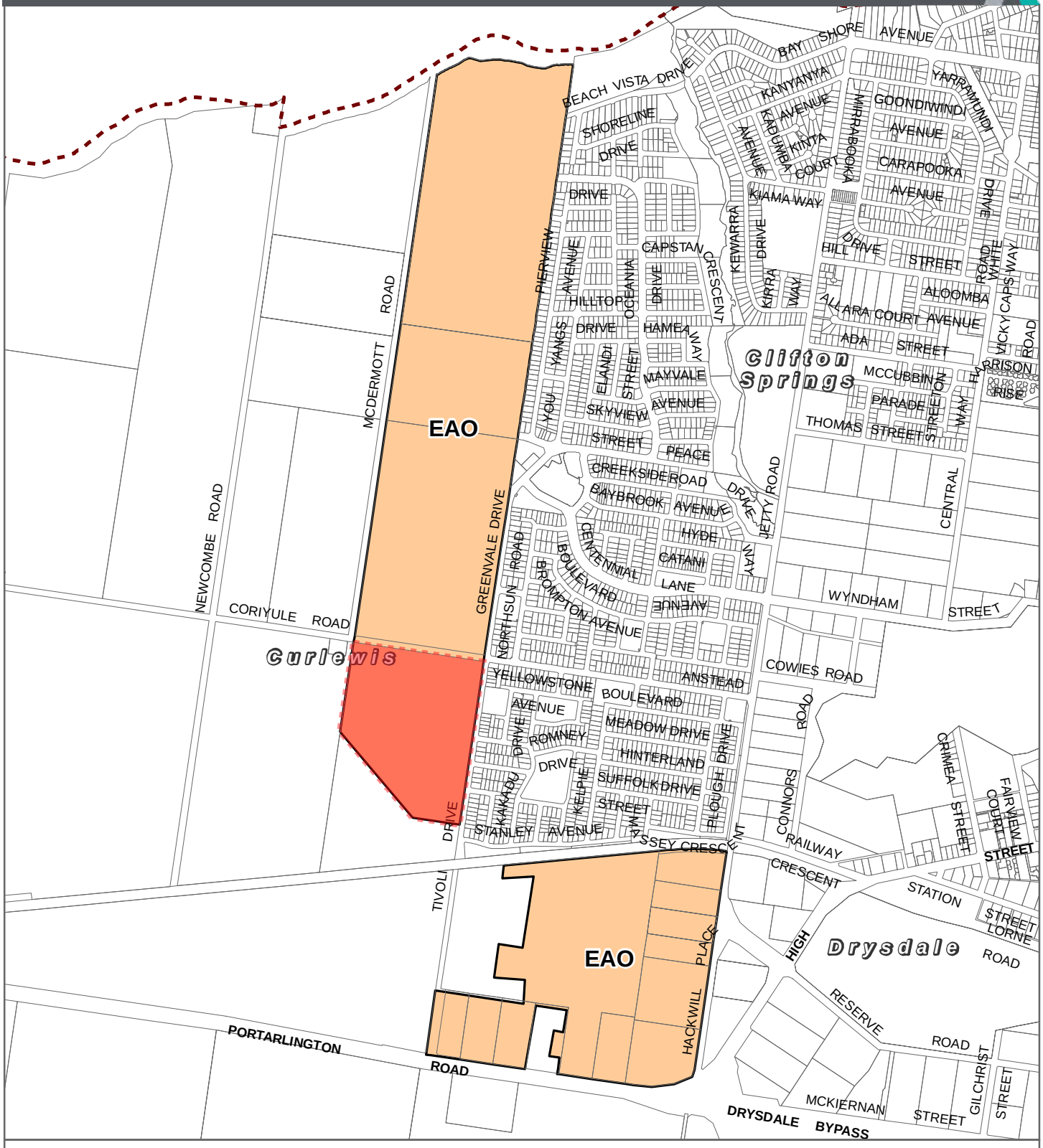


TABLE OF PARCEL IDENTIFIERS
WARNING: Where multiple parcels are referred to or shown on this Title Plan this does not imply separately disposable parcels under Section 8A of the Sale of Land Act 1962
PARCEL 1 = LOT 15 ON LP10309

LENGTHS ARE IN METRES	Metres = 0.3048 x Feet Metres = 0.201168 x Links		Sheet 1 of 1 sheets

GREATER GEELONG PLANNING SCHEME - LOCAL PROVISION
AMENDMENT C387ggee



LEGEND

- EAO - Environmental Audit Overlay
- Local Government Area
- Audit Area

Part of Planning Scheme Map 59EAO

Planning Group
Print Date: 31/05/2023
Amendment Version: 1

0 390 780
Metres

VICTORIA State Government | Department of Transport and Planning

Appendix B Proposed Development Plan

Cardno TGM
ABN 11 125 568 461
Level 1, 27-31 Myers Street (PO Box 1137)
Geelong, VIC Australia 3220
Phone +61 3 5202 4600 Fax +61 3 5202 4691
Email: victoria@cardno.com.au Web: www.cardno.com

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY

JETTY ROAD - STAGE 2
91-125 CORIYULE ROAD CURLEWIS

SCALE 1:2000 (@A1)
DATE 07/07/2022
REVISION 18
REF 13588-06

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARY
- MEDIUM DENSITY
- CONVENTIONAL RESIDENTIAL
- UNENCUMBERED OPEN SPACE
- ENCUMBERED OPEN SPACE
- ABORIGINAL CULTURAL HERITAGE
- DRAINAGE RESERVE
- TREE TO BE RETAINED
- TREE TO BE RETAINED IF POSSIBLE
- TREE TO BE REMOVED

PROPERTY No.5

TOTAL AREA	**25.90 HA**
ENCUMBERED LAND	
Drainage Reserves	1.28 HA
Encumbered Open Spaces	0.31 HA
Aboriginal Cultural Heritage Res	1.02 HA
ENCUMBERED LAND	**TOTAL 2.61 HA**
NET DEVELOPABLE AREA	**23.29 HA**
Unencumbered Public Open Space	2.59 HA (11.1%)
Road Reserves	7.49 HA
COMPACT SITES	10
LOT AREAS	
0m² - 200m²	0
200m² - 300m²	9
300m² - 400m²	204
400m² - 500m²	70
500m² - 600m²	4
	TOTAL 287

STAGE DETAILS

STAGE 1	
Conventional Residential	47
Medium Density	0
STAGE 1A	
Conventional Residential	-
Medium Density	-
STAGE 2	
Conventional Residential	33
Medium Density	0
STAGE 3	
Conventional Residential	27
Medium Density	0
STAGE 4	
Conventional Residential	28
Medium Density	0
STAGE 5	
Conventional Residential	25
Medium Density	0
STAGE 6	
Conventional Residential	12
Medium Density	0
STAGE 7	
Conventional Residential	3
Medium Density	31
STAGE 8	
Conventional Residential	15
Medium Density	0
STAGE 9	
Conventional Residential	0
Medium Density	57
STAGE 10	
Conventional Residential	25
Medium Density	17
STAGE 11	
Conventional Residential	28
Medium Density	0
STAGE 12	
Conventional Residential	11
Medium Density	0
STAGE 13	
Conventional Residential	20
Medium Density	0
STAGE 14	
Conventional Residential	13
Medium Density	14
	TOTAL 406

OVERALL LOT DENSITY (*PER NDA*)	17.4 HA
Medium Density total area	2.48 HA
Potential Lots	119
Yeild	47 Lots per HA
Average lot size	208m²
Conventional Residential total area	10.73 HA
Potential Lots	287
Yeild	26 Lots per HA
Average lot size	373m²

Appendix C PRSA Report - EHS Support Pty Ltd

Preliminary Risk Screen Assessment (PRSA)

Jetty Road, Stage 2 North Area, Curlewis, Victoria

Prepared for:

Cardno Victoria Pty Ltd

Prepared by:

EHS Support

19 September 2022

Document Control

PROJECT DETAILS

Project No.:	C03860
Report Revision No.:	C03860_Jetty_Road_Stage_2_North_R01
Date of Issue:	19 September 2022
Project Director:	 Stephen Cambridge Environmental Auditor (Appointed Pursuant to the *Environment Protection Act 2017*)

REVISION HISTORY

Revision	Revision Date	Details	Authorised
0	9 September 2022	DRAFT	Stephen Cambridge
1	19 September 2022	FINAL	Stephen Cambridge

DISTRIBUTION

Report Status	No. of Copies	Format	Distributed to	Date
Draft	1	PDF	Cardno Victoria Pty Ltd (Owners' Representative)	9 September 2022
Final	1	PDF	Cardno Victoria Pty Ltd (Owners' Representative)	19 September 2022
Final	1	PDF	EPA Victoria	19 September 2022
Final	1	PDF	City of Greater Geelong Council (Planning Authority)	19 September 2022

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Acronyms

AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment Conservation Council
AST	aboveground storage tank
Cardno	Cardno Victoria Pty Ltd
CoGG	City of Greater Geelong Council
COPC	contaminant of potential concern
DPO	Development Plan Overlay
DQOs	data quality objectives
EAO	Environmental Audit Overlay
EHS	Environmental, Health and Safety
EHS Support	EHS Support Pty Ltd
EP	Environmental Professional
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
GDE	groundwater dependent ecosystem
IDE	inflow dependent ecosystem
NHMRC	National Health and Medical Research Council
OCPs	organochlorine pesticides
OPPs	organophosphate pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	polychlorinated biphenyl
PRSA	Preliminary Risk Screen Assessment
SGV DELWP	State Government Victoria – Department of Environment, Land, Water & Planning
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	Volatile Organic Compound

Executive Summary

The following tables provide a summary of the findings from the Preliminary Risk Screen Assessment (PRSA), completed by Stephen Cambridge of EHS Support Pty Ltd ('EHS Support'), who is an Environmental Auditor appointed pursuant to the *Environment Protection Act 2017*.

Table 0-1 Summary of PRSA information

Auditor	Stephen Cambridge
Auditor Account Number	186656
Name of person requesting PRSA	Peter Preece (Cardno Consulting Pty Ltd)
Relationship of person requesting PRSA to site	Development consultant and representative to site owners
Name of site owners	Graham and Heather Moss & Curlewis Bellarine Pty Ltd
Date of auditor engagement	06 April 2022
Completion date of the PRSA	19 September 2022
Reason for PRSA	To assess the potential for contamination associated with land which is subject to redevelopment to various landuses including low density residential landuse, as part of a Development Plan Overlay for Jetty Road Stage 2 Development
Elements of the environment assessed	Land, water (surface water and groundwater)
Planning permit number	Not applicable. The site will be subject to a Development Plan Overlay
EPA region	South-West Region
Municipality	City of Greater Geelong
Dominant – Lot on plan	Lot 1 on Title Plan 198964
Additional – Lot on plan(s)	Lot 9 on Lot Plan 10309 Lot 10 on Lot Plan 10309
Site/premises name	Jetty Road, Stage 2 – North
Building/complex sub-unit No.	-
Street/Lot – Lower No.	91
Street/Lot – Upper No.	125
Street Name	Coriyule
Street type	Road
Street suffix	-
Suburb	Curlewis
Postcode	3222
Building/complex sub-unit No.	-
Street/Lot – Lower No.	32
Street/Lot – Upper No.	70
Street Name	McDermott
Street type	Road
Street suffix	-
Suburb	Curlewis
Postcode	3222
Site area (m^2)	520,057 m^2 (52Ha) approximately

Plan of site/premises/location showing the PRSA site boundary attached	Figure 1 (appended)
Members and categories of support team utilised	• Dana McCue (Human health risk assessment) • Matthew Russ (Contaminated Land)
Further work or requirements	Environmental audit required in some areas of the site (refer to PRSA Statements in **Appendix A**)
Nature and extent of continuing risk of harm	In accordance with the Planning Practice Note 30 (July 2021) and based on the site history reviewed as part of this PRSA, the site has a medium potential for contamination in some areas, due to known concentrations of dieldrin in surface soils exceeding the adopted criterion for human consumption of poultry and eggs; and areas of suspected filling which have not been assessed on the northern property. It is noted that the soil results for organochlorine pesticides, which were reviewed as part of this PRSA, do not exceed the criteria for low density residential landuse (where poultry is not kept), nor do they exceed the criteria for public open space such as parks or playgrounds.
Outcome of the PRSA report	An environmental audit is required in some areas of the site, and part of the site does not require and Environmental Audit (refer to PRSA Statements in **Appendix A**)

Table 0-2 Physical Site information

Historical land use	Open farmland (grazing and cropping)
Current land use	Open farmland (grazing) and vacant land
Proposed land use	Mixed landuse development including sensitive landuses such as low-density residential development
Current land use zoning	Farming
Proposed land use zoning	Residential
Surrounding land use – north	Farming
Surrounding land use – south	Recreation (Curlewis Golf Club)
Surrounding land use – east	Residential properties
Surrounding land use – west	Farming
Has EPA been notified about the site under Section 40 of the Environment Protection Act 2017?	No
Nearest surface water receptor – name	Unnamed Dam (on-site). There is also an unnamed ephemeral creek that runs from the southern dam to the north-west
Nearest surface water receptor – direction	On-site (dam and unnamed ephemeral creek)
Likely point of groundwater discharge	Port Phillip Bay (Corio Bay)
Site aquifer formation	Moorabool Viaduct Sands and/or Quaternary Dune Deposits
Groundwater segment	Segment C

1 Introduction

At the request of Cardno Victoria Pty Ltd (Cardno) acting on behalf of the land owners, Stephen Cambridge of EHS Support completed a PRSA as an EPA Auditor appointed pursuant to the *Environment Protection Act 2017* (the Act), in accordance with Division 2, Part 8.3 of the Act, for an area of land referred to as "Jetty Road, Stage 2 North", located in Curlewis, Victoria, referred to as the site. The location of the site is shown in **Figure 1** (appended).

The following properties are included in the area of land referred to as "Jetty Road, Stage 2 – North", and are subject to this PRSA:

- 32 – 70 McDermott Road, Curlewis, 3222
- 91 – 125 Coriyule Road, Curlewis, 3222

We understand that Cardno is currently in the process of compiling documentation for submission of the Development Plan Overlay (DPO) application to the Planning Authority, being City of Greater Geelong Council (CoGG), and in accordance with the Planning Practice Note 30 (July 2021), that a PRSA is to be conducted to determine whether the site is potentially contaminated, and whether the site or parts of the site are recommended for an Audit to be undertaken.

The PRSA is required to assess the capacity of the site to support future sensitive uses as part of the proposed amendment. The assessment of potentially contaminated land is required in line with *Ministerial Direction Number 1 – Potentially Contaminated Land*, and *Planning Practice Note 30 (July 2021)*.

The land subject to this PRSA is part of a broader development project referred to as "Jetty Road, Stage 2", which encompasses the site boundary and additional land to the south. Stephen Cambridge of EHS Support has also been engaged to prepare a PRSA for the land to the south (collectively referred to as "Jetty Road, Stage 2 – South"). The PRSA for "Jetty Road, Stage 2 – South", is provided in a separate document titled *Preliminary Risk Screen Assessment, Jetty Road, Stage 2 – South*. Due to the size of each of the sites, and the geographical separation between the two areas, it was the preference of EPA that two separate PRSAs were to be conducted (i.e., Jetty Road Stage 2 North, and Jetty Road Stage 2 South).

An extract of a site plan showing the entire area of the "Jetty Road – Stage 2" development is provided in **Figure 1-1** below.

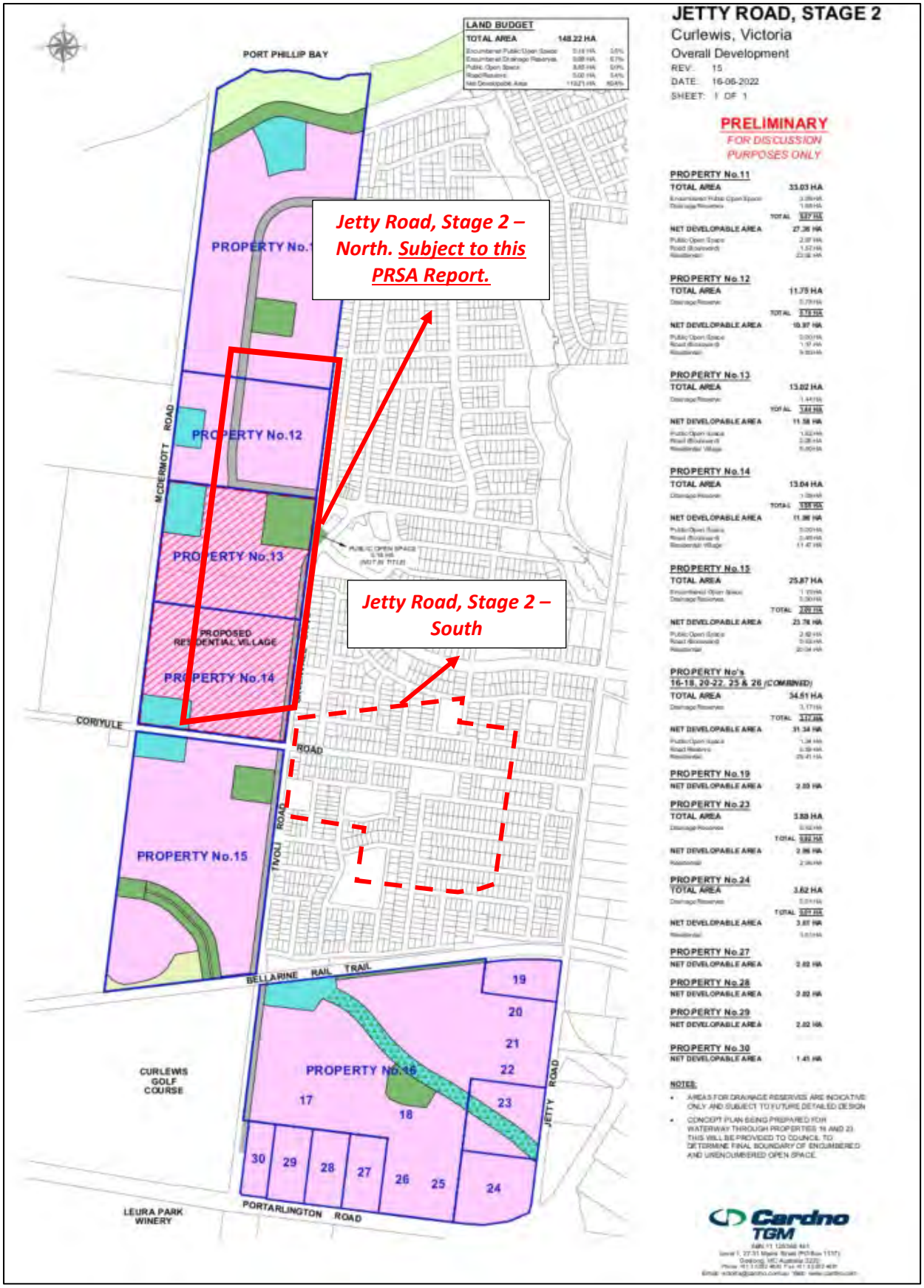


Figure 1-1 Site plan showing Jetty Road – Stage 2 Development Area

1.1 Purpose and Objectives

Under Section 204(2) of the *Environment Protection Act 2017* (the Act), the purpose of a PRSA 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.

The objective of this PRSA is to assess the likelihood of the presence of contaminated land at the site and determine whether or not an environmental audit is required, in order to assist the Planning Authority in making an assessment of the suitability of the site for the proposed land use. It is understood that the Planning Authority (CoGG), will implement Environmental Audit Overlays (EAOs) to the land which requires an Audit as an outcome of this PRSA.

1.2 Scope of PRSA

The scope of works for the PRSA is in accordance with the methodology outlined in EPA Guideline 2021 (February 2022).

To meet the project objectives, the following scope of works has been completed for the PRSA:

- A site visit and visual inspection of the site and surrounds was conducted on 22 April 2022 by Stephen Cambridge of EHS Support, which included recording of observations relevant to the potential for contamination to be present on the site.
- Review of the following environmental assessment reports prepared by Environmental Site Assessments Pty Ltd (ESA Group) including site history reviews and soil sampling and analytical results, included as **Appendix B**;
    - *Environmental Assessment, 32-70 McDermott Road and 91 – 125 Coriyule Road, Curlewis*, 2019, prepared by Environmental Site Assessments Pty Ltd
    - *Environmental Investigation, 91 – 124 Coriyule Road, Curlewis*, 2022, prepared by Environmental Site Assessments Pty Ltd
- Supplementary site history reviews such as review of Victoria Unearthed database, further information from previous site owners, and recent historical aerial photographs for relevant site history information for the site and surrounds.
- Development of a Conceptual Site Model (CSM).
- Assessed the likelihood of the presence of contaminated land.
- Prepared this PRSA report and PRSA Statements, included in **Appendix A**.

The PRSA scope and key information is summarised in the following table.

Table 1-1 PRSA Scope and Key Information

Item	Description
Historical land use	Farming, including cattle grazing and cropping (including potato farming)
Current land use	Farming and vacant land
Proposed land use	Residential (including low density) open space and infrastructure such as roads
Elements of the environment assessed in the PRSA	☒ Land: all environmental values that apply to the land use category to be considered ☒ Water (surface water): all environmental values that apply to the applicable segment to be considered ☒ Water (groundwater): all environmental values that apply to the applicable segment to be considered
Elements of the environment excluded from the PRSA	Ambient air and ambient sound were excluded as they were not considered relevant to the assessment of land for the potential presence of contamination for this site
Standards and reference documents considered	Environment Protection Act 2017 Environment Protection Regulations 2021 Environment Reference Standard 2021 National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013) Environmental Auditor Guidelines – Provision of statements and reports for environmental audits and preliminary risk screen assessments (EPA Publication 2022), August 2021 Guidelines for conducting preliminary risk screen assessments (EPA Publication 2021), February 2022 Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds. Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances. Western Australian State Government, Department of Primary Industries and Regional Development, Chickens, eggs and organochlorines (https://www.agric.wa.gov.au/livestock-biosecurity/chickens-eggs-and-organochlorines)
Assumptions and limitations of the PRSA	None
Exclusions from the PRSA	None

1.3 Auditor's Support Team

The Auditor obtained input for the PRSA from the following professionals:

- Ms Dana McCue is a qualified and experienced human health risk assessor who provided advice on the adoption of the criteria used for organochlorine residues in soil, with respect to poultry in a residential setting.
- Mr Matthew Russ is a qualified environmental engineer and scientist with over 7 years of experience in the contaminated land industry. Matthew was directly involved in reviewing previous environmental site assessment reports and historical site information to inform the PRSA.

2 Site Description and Environmental Setting

2.1 Site Details

The site includes two separately owned land areas, which are currently owned by Graham and Heather Moss (32 – 70 McDermott Road) and Curlewis Bellarine Pty Ltd (91 – 125 Coriyule Road) and is bounded by Tivoli Drive and Greenvale Drive to the east, McDermott Road to the west, the Bellarine Rail Trail to the south, and farming properties to the north. Coriyule Road runs east-west through the centre of the site, separating the two properties.

A summary of important site information is presented in **Table 2-1** below. The location of the site is shown in **Figure 1** (appended).

Table 2-1 Site Details and Information

Items	Details
Site Address	32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis
Site Area	Approximately 52 Hectares
Title Identification (Lot & DP)	32 – 70 McDermott Road: Lot 9 on Lot Plan (LP) 10309 and Lot 10 on Lot Plan (LP) 10309 91 – 125 Coriyule Road: Lot 1 on Title Plan (TP) 198964
Local Government Administration (LGA)	City of Greater Geelong
Zoning of Site and Surrounding Area	The site is zoned Farming Zone (FZ)
Site Overlays	No overlays exist at the site. However, areas of the site are listed as areas of cultural heritage sensitivity
Current Site Use	The site is used for farming purposes and/or vacant
Future Site Use	Residential development site, including open space and infrastructure development
Adjacent Site Uses	• **North:** Farming land • **East:** Residential properties/developments • **South**: Curlewis Golf Club • **West:** Farming land

2.2 Current Site Features

2.2.1 31 – 70 McDermott Road

The property at 31 – 70 McDermott Road is approximately 26 Ha and has been used for crop farming (including potato farming) since circa 1960s, with different crops rotating through the various paddocks. This area continues to be used for farming and is predominantly open land with the exception of a derelict shed in the southern portion of this property.

At the time of the site inspection, this property comprised of general paddocks with the exception of several burn piles (trees, fence post etc) and a derelict shed in the central and southern portions of this property. Significant filling was not observed on this property with the exception of an area to the east of the derelict shed which may have been filled as concrete fragments were evident at the surface and the land appeared to be filled above the levels of the surrounding land contours. A large in ground concrete water tank was also present to the immediate south of the derelict shed.

Key existing and historical site features relevant to potentially contaminating activities on this property are shown on **Figure 2** (appended).

2.2.2 91 – 125 Coriyule Road

The property at 91 – 125 Coriyule Road, which is also approximately 26 Ha, has also historically been used for crop farming (including potato farming) and grazing purposes. Anecdotal evidence provided by the previous owner of the site indicates that crop farming only occurred in the northern and central portions of this property, and the southern areas were only used for grazing. At the time of the site inspection this property was open farmland with a small residential dwelling and yard along the western boundary.

A large dam with a gully for water flow was located in the southern portion of the property. A smaller dam was also located within the gully and also in the northern portion of the property. A historical dam was located in the northeast corner of this property but was infilled in circa 2014.

Key existing and historical site features on this property are shown on **Figure 2** (appended).

2.3 Environmental Setting

2.3.1 Topography

Surface elevation at the site is approximately 38 to 55 mAHD. The site generally slopes towards the north to northwest. A gully is present running in a northeast direction from the property to the south (Curlewis Golf Club) to the dam on 91 – 125 Coriyule Road. The gully continues off-site to the property located west of 91 – 125 Coriyule Road.

2.3.2 Surface Conditions

The site is predominantly unsealed and open paddocks. The exception to this is beneath the residential dwelling located on the western boundary of 91 – 125 Coriyule Road.

2.3.3 Vegetation

Vegetation at the site predominantly comprises of grasses with sparse trees. Trees are only located in the central portion of the southern site area, and near the residential dwelling on the southern site area.

Native vegetation comprising of grassy woodlands (lower slopes or hills woodlands) may be present on the site.

2.3.4 Hydrology

Surface water is likely to infiltrate directly into the subsurface in unsealed areas. During high rainfall surface water is likely to flow into low lying areas, including the dams and gully located in the southern portion of the site. The nearest surface water body/bodies are the dams located in the southern portion of the site. The gully likely forms an ephemeral creek during high rainfall events. Water likely flows through the gully into the dam located on 91 – 125 Coriyule Road, then off-site to the west.

The nearest surface water body/bodies located off-site are the dams located on adjacent properties, the nearest of which is located immediately south of the site at the Curlewis Golf Club. It is likely that this off-site dam floods, water runs through the gully onto the southern portion of the site.

Lake Lorne is located approximately 1 km east of the site, and Port Phillip Bay (Corio Bay) is located approximately 1.1 km north of the site.

2.3.5 Acid Sulfate Soils

The area is mapped on the Atlas of Acid Sulfate Soils (CSIRO) as being at low probability of occurrence on site (6 – 70 %).

2.3.6 Geology

According to the Portarlington 1:63,360 Geological Map, the site is likely underlain by gravel, sand and silt of the Moorabool Viaduct Sands and sand, silts, and clays from dune deposits. A summary of the lithology of these geological units is presented in **Table 2-2**.

Table 2-2 Summary of Geology

Age	Formation/Unit	Area	Description
Miocene to Pliocene	Moorabool Viaduct Sands	Northern Portion of Site	Gravel, sand and silt (marine to nonmarine deposits)
Pleistocene to Holocene	Dune Deposits	Southern Portion of Site	Sand, silt and clay (inland dune and some swamp deposits)

2.3.7 Hydrogeology

A summary of the expected site hydrogeology is provided in **Table 2-3**. Based on State-wide groundwater maps, groundwater is expected to be encountered between 5 and 20 metres below ground level (m bgl) across the site. Shallower groundwater may be encountered in the vicinity of the dam and gully in the southern portion of the site.

Groundwater is expected to exist within an aquifer of the Moorabool Viaduct Sands or Dune Deposits. This aquifer is likely to be characteristic of an unconfined aquifer where the main transport and storage mechanisms is via primary porosity between gravels and sands within the aquifer matrix. Clay rich lenses within these formations may also result in semi-confined conditions in some areas on a regional scale.

The direction of groundwater flow at the site is currently unknown however is likely to be towards the north to northwest, towards Port Phillip Bay (Corio Bay). However, local variations may exists influenced by surface topography and surrounding water bodies.

According to the State-wide groundwater salinity map, groundwater salinity beneath the site is expected to range between 3,500 – 7,000 mg/L. Based on the expected salinity, groundwater beneath the site would be classified as Segment C or D groundwater in accordance with the Environmental Reference Standard, 2021 (ERS, 2021).

Table 2-3 Summary of Hydrogeology

Item	Details
Depth to water	Between 5 and 20 m bgl, with shallower groundwater in areas
Aquifer(s)	Moorabool Viaduct Sands or Dune Deposits
Groundwater flow direction	Unknown, likely towards the north to northwest
Groundwater salinity and segment[1]	Segment C or D (3,500 – 7,000 mg/L)
Environmental Values of groundwater to be protected (based on Segment C) in accordance with the ERS, 2021	• Water dependent ecosystems and species • Potable mineral water supply • Agriculture and irrigation (stock watering) • Industrial and commercial use • Water-based recreation (primary contract recreation) • Traditional owner cultural values • Buildings and structures • Geothermal properties
Point of groundwater discharge	Unknown. Likely Port Phillip Bay or surrounding artificial waterways such as dams.
Surrounding groundwater bores (within a 2 km radius)[2]	There are 12 registered bores within a 2km radius of the site. Information from these bores include: • One groundwater bore (134237) is registered on-site for groundwater investigation use. This bore is located in the northeast corner of 91 – 125 Coriyule • Lithology encountered during installation of bores included sand, silty sand, clayey sand, silty clay
Surrounding groundwater uses	Surrounding bores were registered for the following uses: • Groundwater investigation bores (5) • Domestic and Stock (6) • Unknown (1)
Nearest extractive use	The nearest groundwater well (WRK965678) to the site used for domestic and stock purposes is approximately 400 m to the north.

3 Site History and Site Inspection

A detailed site history review was completed as part of the previous assessments completed at the site. A review of previous assessments completed at the site is outlined in **Section 4**. In addition, the Auditor undertook: a review of more recent aerial photographs; verification of publicly available information including information on the Victoria Unearthed website; and also obtained additional site history information from the previous site owners.

Based on the information reviewed, the site has historically been used for farming purposes, including cropping in some areas, by various private owners. A review of historical business directories, certificates of title and aerial photographs does not suggest that the site was used for any other purposes, with only minor changes to site features observed since circa 1950s, including vegetation clearing, rotating of crops and construction of new structures (residential dwelling in southern portion of the site).

The Auditor undertook an inspection of the site on 22 April 2022. The objective of the site inspection was to identify areas that may indicate the potential for contamination of the land. The site was observed and photographed to document the conditions during the site walkover. Key site features observed are outlined in **Section 2**. In summary, there were no potentially contaminating features identified on the site with the exception of minor areas of suspected historical filling. The site was observed to be used for general farming, with no sheep/cattle dips observed or evidence of significantly filled land.

In addition, anecdotal information was also provided by the former owner of 91 – 125 Coriyule Road (Mark Chergwin), which indicated that the northern portion of this property was used for crops rotated with grazing, however, there was no specific recollection of the use of pesticides as part of the cropping. The former owner noted that the southern portion of this property was only used for grazing. The current owner of 31 – 70 McDermott Road (Heather Moss) indicated that no filling of land had occurred on this property, however that Council had used the southern portion of the site as a laydown area for road and drainage works along Coriyule Road, which can be seen from the most recent aerial photographs.

The land use, based on the site history information, is presented on **Figure 2** attached.

Photographs from the site inspection are presented as follows.

Photographs from 31 – 70 McDermott Road

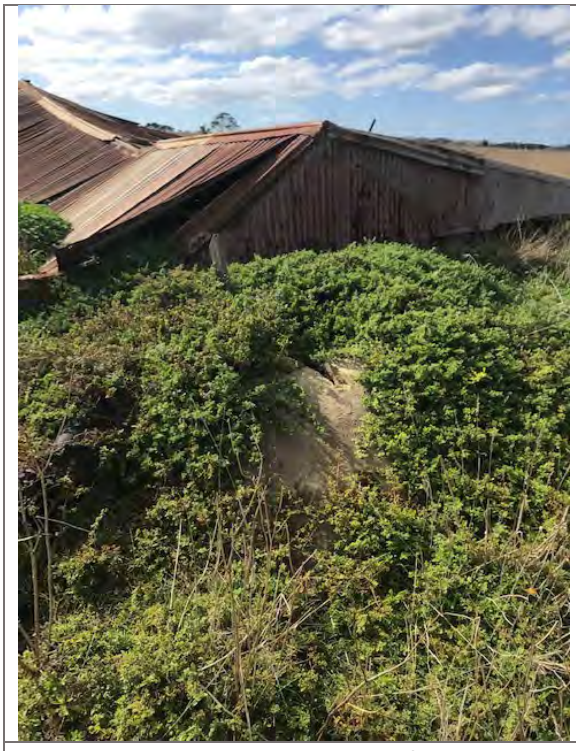


Photo 1: Former Shed and top of in-ground water tank

Photo 2: Burn pile of fence posts and former trees

Photo 3: General paddock areas

Photo 4: General paddock areas

Photographs from 91 – 125 Coriyule Road

Photo 5: Large dam on southern part of property

Photo 6: location of filled dam in north-eastern corner of property

Photo 7: gully in southern part of property

Photo 8: General paddock areas

Photo 9: stock pens north of existing house

Photo 10: general rubbish south of existing house

4 Previous Site Assessments

4.1 Environmental Site Assessment (ESA Group, 2019)

Prior to EHS Support been engaged to complete the PRSA, Environmental Site Assessments Pty Ltd (ESA Group) was engaged by the current landowners to undertake an environmental site assessment (ESA) with limited soil sampling at the site. It is noted that the EPA PRSA guidelines do not generally allow multiple phases of soil investigation or grid-based soil sampling. However, in this case the first ESA was undertaken prior to the PRSA commencing, and therefore the Auditor has relied on this as part of the site history information, which was clarified with, and acceptable to, EPA. A summary of key information relating to the assessment completed by ESA Group is provided in **Table 4-1** and is further detailed in the following sections, including a review of the suitability of the assessment to inform the PRSA.

Table 4-1 Summary of Environmental Site Assessment (ESA Group, 2019)

Report Title	Environmental Assessment, 32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis
Report Date	22/02/2019
Environmental Assessor	Environmental Site Assessments Pty Ltd (ESA Group)
Type of Assessment	Environmental site assessment with limited sampling
Dates of Field Inspections / Investigations	13 February 2019
Scope of Works	• Site history review • Site inspection • Limited soil sampling • Preparation of report outlining conclusions and recommendations
Analytical NATA Accredited Laboratories	Primary Laboratory: ALS Environmental Secondary Laboratory: Eurofins Scientific

4.1.1 Scope and Methodology

ESA Group was engaged by the current site owners to undertake an ESA with limited soil sampling at the site to determine whether the site is potentially contaminated in accordance with Ministerial Direction No.1 – Potentially Contaminated Land.

The scope of the ESA and limited sampling included:

- Site history review to assist in determining its potential for contamination, including review of the following:
  - Historical certificates of titles and ownership details;
  - Historical aerial photographs, business directories and maps;
  - EPA records including licensed premises, works approvals, notices, priority sites, environmental audits, and groundwater quality restricted use zones; and
  - Review of information regarding landfills, waste management facilities, dry cleaners, gasworks, and mechanics/service stations.

- Collection of geological and hydrogeological information about the site and its surrounds;
- An inspection of the site;
- A limited soil sampling program comprising of the collection of shallow soil samples from 24 locations and analysis of samples for contaminants of potential concern along with select analysis for broad analytical suites; and
- Preparation of report outlining key conclusions and recommendations.

4.1.2 Overview of Results and Conclusions

4.1.2.1 Site History Review

The site history review completed by ESA Group indicates that the site has historically been used for farming purposes, including cropping in some areas, by various private owners. A review of historical business directories, certificates of title and aerial photographs does not suggest that the site was used for any other purposes, with only minor changes to site features observed since circa 1950s, including vegetation clearing, rotating of crops and construction of new structures (residential dwelling in southern portion of the site).

In addition, a review of historical business directories and EPA records relating to the surrounding areas did not identify any significant potential off-site sources of contamination.

Based on the site history results, ESA Group concluded that the historical use of the site represented a low to medium risk of contamination, predominantly due to the potential historical application of fertilizers and herbicides for cropping. The ESA report listed the following potential contaminants of concern based on the site history information:

- Fertilisers: copper and cadmium; and
- Herbicides: arsenic, mercury, organochlorines, and organophosphates.

The auditor notes that the site history review was generally appropriate to assess the potential for contamination to be present at the site from historical sources of contamination. The ESA report listed organochlorines and organophosphates as herbicides, however the Auditor considers that they are associated with pesticide use, rather than herbicide, however this is not considered to affect the conclusions of the PRSA, as analysis for likely pesticide residues was conducted in any event. In addition, the Auditor undertook a supplementary review of annual historical aerial photographs between 2009 and 2022 to check if any filling had occurred during that period. The supplementary review identified a former dam located in the northeast corner of 91 – 125 Coriyule Road which was subsequently filled with unknown material. Sampling of this area was undertaken during the timeframe of the PRSA and is detailed in Section 4.2.

4.1.2.2 Soil Sampling

Due to the potential historical application of fertilizers and herbicides at the site, ESA Group undertook a limited soil sampling program for the identified potential contaminants of concern.

The soil sampling program comprised of the collection of shallow soil samples from between 0 – 0.15 m below ground level (m bgl) at 24 grid-based locations across the site. Shallow soils encountered at the site typically composed of medium plasticity dark brown clayey silts. No elevated PID readings were recorded, nor was any evidence of odorous or stained soils documented, however no soil bore logs were provided in the report.

Soil samples were selected for the following analysis:

- 18 soil samples for organochlorine pesticides (OCPs), organophosphate pesticides (OPPs) and metals (arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, mercury, manganese, nickel, lead, selenium vanadium and zinc)
- 6 soil samples for Broad NEPM Suite (metals, total recoverable hydrocarbons (TRHs), benzene, toluene, ethylbenzene, xylene, naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAHs), phenols, OCPs, OPPs, PCBs and cyanide)

Analytical results were compared to human health and ecological based criteria for a low-density residential land use, including human health investigation and screening levels (HILs and HSLs), ecological investigation and screening levels (EILs and ESLs) and TPH management limits, as per the ASC NEPM 2013.

ESA Group concluded that concentrations of all analytes were below the adopted criteria, and therefore as per Ministerial Direction No. 1, the site was considered suitable for a sensitive use (i.e., low density residential).

However, the Auditor notes that concentrations of OCPs, predominantly dieldrin (up to 0.63 mg/kg) were reported in the majority of shallow soil samples above the *Government of Western Australia – Department of Primary Industries and Regional Development*[1] criterion of 0.06 mg/kg, which is protective of poultry and eggs for human consumption. Under the proposed low-density residential land use of the site, the production of chickens or eggs for domestic purposes may occur, and therefore this criterion is considered to be relevant.

Based on the spatial distribution of dieldrin concentrations at the site, the dieldrin appears to be restricted to areas where the site history review indicates the land was used for cropping. This encompasses the entire area of 32 – 70 McDermott Road, and the northern and central areas of 91 – 125 Coriyule Road. Concentrations of dieldrin were not reported in the southern areas of 91 – 125 Coriyule Road where only grazing occurred historically.

A site plan showing the location of concentrations of dieldrin is provided in **Figure 3** (appended).

4.1.3 Auditor Comments and Review of Quality Assurance and Quality Control

Overall, the Auditor notes that the ESA and limited soil sampling was generally appropriate and formed a suitable basis to assess the potential for contamination to be present at the site.

A review of the ESA and limited soil sampling completed by ESA Group indicates that it largely met the requirements outlined in schedule B2 of the ASC NEPM 2013 and AS 4482.1-*2005 Guide to the investigation and sampling of sites with potentially contaminated soil – Non-volatile and Semi-volatile compounds*, to the extent applicable based on the scope and objectives.

An evaluation of key requirements and QAQC procedures, including Auditor comments, is summarised below.

[1] https://www.agric.wa.gov.au/livestock-biosecurity/chickens-eggs-and-organochlorines

Table 4-2 Evaluation of ESA Report (ESA Group, 2019)

Item		Auditor Comments	Suitable to Inform PRSA
Preliminary Investigation			
Site History Review		The site history review completed is presented in Section 3 and 4 of the ESA report. The Auditor considers that the site history documentation was of sufficient quality in which to base the conclusions regarding the potential for contamination at the site, and included all relevant information to the site, as detailed in Schedule B2 of the ASC NEPM 2013. The Auditor undertook some supplementary site history reviews were considered necessary.	Partially
Environmental Setting		The environmental setting is documented in Section 2 of the ESA report. The environmental setting provides key information relating to expected topography, geology, and hydrogeological conditions at the site.	Yes
Site Inspection		A site inspection was completed as part of the ESA and is summarised in Section 5. The auditor undertook more recent site inspection in 2022.	Yes
Conceptual Site Model (CSM)			
Potential Sources and Contaminants of Concern		A limited CSM was included in the ESA report, however, the CSM only identified potential sources of contamination and potential contaminants of concern, rather than also detailing potential receptors and exposure pathways. An updated CSM is included as part of this PRSA.	Partially
Potential Affected Media			
Potential Receptors and Exposure Pathways			
Limited Soil Sampling Program			
Data Quality Objectives (DQOs)		No DQOs were included in the ESA report. Given that the soil sampling completed was limited, the omission of DQOs is not considered significant.	NA
Sampling and Analysis Quality Plan (SAQP)		A brief SAQP is outlined in Section 7 of the ESA report.	Partially
Soil Sampling Program	Grid-based sample locations	Soil samples were retrieved from a total of 24 grid-based sampling locations. It is noted that the number of grid-based sampling locations was not in accordance with the minimum number of sample locations outline in AS 4482.1 2005. However, this is not considered to be significant based on the scope and objectives of the limited sampling. As previously noted, grid-based sampling is generally not advised to be undertaken under the EPA PRSA Guidelines, however as this sampling was undertaken prior to the PRSA commencing, the Auditor has relied on the sampling results as part of the existing information for the site.	Yes
	Sampling Procedures	Sampling procedures are outlined in Section 7 of the ESA report and were generally appropriate	Yes
	Field Records and Field Methods	Adopted field methods were documented in Section 7 of the ESA report and are generally considered appropriate. Although field records such as bore logs or photographs were not included in the ESA report, general field observations such as PID and odours were documented in the report.	Yes

Item		Auditor Comments	Suitable to Inform PRSA
	Analytical Suite	The adopted analytical suite included potential contaminates of concern and a broader suite of analytes and is therefore considered to be appropriate. It is noted that no specific details on herbicide use at the site was obtained from the site history review, therefore this is a potential data gap for the cropping areas of the site.	Partially
	Adopted Criteria	HIL/HSLs, EIL/ESLs and TPH management limits were adopted. Additional applicable criteria for OCPs was not adopted, however the auditor has compared analytical concentrations to additional criteria for human consumption of poultry and eggs, where not applied as part of the site assessment.	Partially
	Sample Preservation	Based on the documented field methods, sample preservation procedures adopted were generally appropriate. However, no sample receipt notices (SRNs) were included in the report to confirm this.	Partially
	QAQC – Field Duplicates and Triplicates	A total of 24 primary samples were analysed. One duplicate and one triplicate sample pair was analysed during the field program. It is noted that this is not strictly in accordance with ASC NEPM 2013 which require 5% duplicate and triplicate samples be collected (1:20 primary samples). Given that the sampling methodology adopted was consistent, this is not considered to be significant. Relative percent differences (RPDs) were below the acceptance criteria of 30%.	Partially
	QAQC – Field Rinsate and Trip Blanks	Field, rinsate and trip blanks were retrieved during the soil sampling program at an appropriate frequency (i.e., one per day etc.). All analytes were below the laboratory limit of reporting in the blank samples	Yes
	QAQC – Internal Laboratory QAQC	A review of internal laboratory QAQC procedures is documented in Section 7 of the ESA report. A review of the internal laboratory QAQC results indicates that all samples were received and analysed within the acceptable holding times, and all method blanks, internal duplicates, laboratory spikes and matrix spike relevant to the site were within the acceptable limits.	Yes

4.2 Environmental Investigation (ESA Group, 2022)

In 2022, ESA Group was engaged by the current landowners of 91 – 125 Coriyule Road to undertake an environmental investigation of unknown material used to backfill a former dam in the northeast corner of this property, as identified during a supplementary review of recent historical aerial photographs by the Auditor.

A summary of key information relating to the investigation completed by ESA Group is provided in Table 4-3, and is further detailed in the following sections, including a review of the suitability of the assessment to inform the PRSA.

Table 4-3 Summary of Environmental Investigation (ESA Group, 2022)

Report Title	Environmental Investigation, 91 – 125 Coriyule Road, Curlewis
Report Date	01/08/2022
Environmental Assessor	Environmental Site Assessments Pty Ltd (ESA Group)
Type of Assessment	Soil Assessment
Dates of Field Inspections / Investigations	19 July 2022
Scope of Works	• Soil sampling program • Preparation of conceptual site model • Preparation of report outlining conclusions and recommendations
Analytical NATA Accredited Laboratories	Primary Laboratory: ALS Environmental Secondary Laboratory: Eurofins Scientific

4.2.1 Scope and Methodology

The scope of the environmental investigation included:

- Excavation and soil sampling from four (4) test pits within the former dam area;
- Excavation of an additional twelve (12) test pits to inform extent of backfill material;
- Analysis of samples for contaminants of potential concern including PAHs, metals, OCPs, TRHs, pH, chloride and sulfate;
- Preparation of a conceptual site model encompassing the entire property at 91 – 125 Coriyule Road based on the results of the investigation and the limited sampling completed as part of the 2019 ESA (ESA Group, 2019); and
- Preparation of report outlining key conclusions and recommendations.

It is noted that this investigation did not include further investigation within the property at 32 – 70 McDermott Road.

4.2.2 Overview of Results and Conclusions

4.2.2.1 Soil Sampling

The soil sampling program comprised of the collection of soil samples from test pits excavated within and surrounding the former dam located in the northeast corner of 91 – 125 Coriyule Road.

A total of four test pits were excavated within the inferred footprint of the former dam, and an additional twelve pits was excavated in areas outside of the dam. A site plan showing the location of the test pits is provided in **Figure 3** (appended).

Fill soils encountered comprised of light brown to orange, loose sandy clays with medium plasticity. Fill soils were encountered up to a depth of 2.6 m bgl within the former dam footprint, and 1.0 m bgl in the area immediately surrounding the dam where there was further evidence of historical filling. Underlying natural soils typically comprised of brown to dark brown, high plasticity clays and sandy silts. No elevated PID readings were recorded, nor was any evidence of odorous or stained soils documented.

Two soil samples per test pit (total of 8) excavated within the dam footprint were selected for analysis. No samples were retrieved from the additional twelve test pits excavated as these were only used for observational purposes (i.e., presence or absence of fill material).

Soil samples were selected for the following analysis:

- 8 soil samples for OCPs, metals (arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, mercury, manganese, nickel, lead, selenium vanadium and zinc), PAHs and TRHs.
- 2 soil samples were also selected for pH, chloride, and sulfate analysis.

In addition to the above, a further two samples from outside of the dam footprint were selected for analysis for pH, clay content, cation exchange capacity, total organic carbon, iron, copper, lead, nickel, and zinc to inform site specific EILs.

Analytical results were compared to human health and ecological based criteria for a low-density residential land use, including human health investigation and screening levels (HILs and HSLs), ecological investigation and screening levels (EILs and ESLs) and TPH management limits, as per the ASC NEPM 2013. Additional criteria from the Canadian Council of Ministers of the Environment (CCME) and United States Environmental Protection Agency (US EPA) were also adopted in lieu of Australian based criteria (where applicable).

ESA Group concluded that concentrations of all analytes were below the adopted criteria, except for elevated manganese at one location above the US EPA ecological based criteria of 220 mg/kg. ESA Group concluded that the elevated concentration of manganese was likely representative of natural soil conditions rather than pollution.

Based on the Auditor review of the soil analytical results, the Auditor generally agrees with the conclusions. Regarding the elevated manganese concentrations, manganese is naturally elevated in many Australian soils. For example, the background ranged reported in ANZECC *Guidelines for the Assessment and Management of Contaminated Sites*, 1992, is 4 mg/kg to 12,600 mg/kg. Therefore, the US EPA ecological criteria for manganese may be overly conservative for Australian conditions. Furthermore, the bioavailability of manganese is linked to soil pH, organic matter content, moisture, and soil aeration. Manganese toxicity occurs mostly at a soil pH of below 5.5 (Schulte and Kelling, 1999) and mainly effects plants shoots. The pH reported at the site ranged from 6.2 – 8.1, indicating that potential risk to ecological receptors is likely to be low.

4.2.2.2 Conceptual Site Model

As part of the environmental investigation, ESA Group prepared a CSM for the property at 91 – 125 Coriyule Road based on the results of the soil sampling completed and previous soil sampling completed as part of the ESA (ESA Group, 2019).

The CSM prepared by ESA Group provided a good representation of site related information regarding contamination sources, receptors, and exposure pathways.

Overall, ESA Group concluded that although material used to backfill the former dam located in the northeast corner of the property is unlikely to pose a risk to environmental values applicable under the proposed future low density residential land use, elevated dieldrin identified in the 2019 ESA may preclude the environmental values of maintenance of ecosystems and production of food, flora and fibre and require further investigation.

4.2.3 Auditor Comments and Review of Quality Assurance and Control

Overall, the Auditor notes environmental investigation was generally appropriate and formed a suitable basis to assess the potential for contamination to be present due to material used to backfill a former dam in the northeast corner of the property.

A review of the investigation completed by ESA Group indicates that it largely met the requirements outlined in Schedule B2 of the ASC NEPM 2013 and AS 4482.1-*2005 Guide to the investigation and sampling of sites with potentially contaminated soil – Non-volatile and Semi-volatile compounds*, to the extent applicable based on the scope and objectives.

An evaluation of key requirements and QAQC procedures, including auditor comments, is summarised below.

Table 4-4 Evaluation of ESA Report (ESA Group, 2022)

Item		Auditor Comments	Suitable to Inform PRSA
Conceptual Site Model (CSM)			
Potential Sources and Contaminants of Concern		A CSM was included in Section 7 of the investigation report was generally in accordance with Schedule B2 of the ASC NEPM 2013. An updated CSM is included as part of this PRSA.	Yes
Potential Affected Media			
Potential Receptors and Exposure Pathways			
Soil Sampling Program			
Data Quality Objectives (DQOs)		DQOs are outlined in Section 4 of the investigation report. The DQOs outlined are considered appropriate for the investigation and is generally consistent with the DQO process outlined in Schedule B2 of the ASC NEPM 2013.	Yes
Sampling and Analysis Quality Plan (SAQP)		A brief SAQP is outlined in Section 5 of the investigation report.	Yes
Soil Sampling Program	Targeted Sampling Locations	Soil samples were positioned appropriately to target material used to backfill the former dam. Observational test pits were also positioned appropriately to determine the lateral extent of the backfill material. The targeted sampling was considered to be within the EPA Guidelines for PRSAs for soil sampling.	Yes
	Sampling Procedures	Sampling procedures are outlined in Section 6 of the investigation report and were generally appropriate	Yes
	Field Records and Field Methods	Adopted field methods were documented in Section 6 of the investigation report and are generally considered appropriate. A copy of field records, including bore logs and calibration certificates, was provided in Appendix 3 and Appendix 5	Yes
	Analytical Suite	The adopted analytical suite included potential contaminates of concern and is therefore considered to be appropriate.	Yes
	Adopted Criteria	HIL/HSLs, EIL/ESLs and TPH management limits were adopted. In addition, criteria from the CCMA or US EPA was also adopted in lieu of Australian based criteria (where required).	Yes

Item		Auditor Comments	Suitable to Inform PRSA
	Sample Preservation	Based on the documented field methods, sample preservation procedures adopted were generally appropriate. However, no sample receipt notices (SRNs) were included in the report to confirm this.	Partially
	QAQC – Field Duplicates and Triplicates	A total of 10 primary samples were analysed. One duplicate and one triplicate sample pair was analysed during the field program., which is in accordance with ASC NEPM 2013 which require 5% duplicate and triplicate samples be collected (1:20 primary samples). RPDs were generally reported below the acceptance criteria of 30%, with the exception of barium (116%), lead (117%), nickel (87%) and zinc (140%). A review of the reported concentrations indicate that the elevated RPDs are likely due to minor sample heterogeneity within the fill and will not impact on the results of the investigation.	Yes
	QAQC – Field Rinsate and Trip Blanks	Field and trip blanks were retrieved during the soil sampling program at an appropriate frequency (i.e., one per day etc.). No rinsate sample was retrieved, however, it is noted that no reusable equipment (such as a hand auger) was used. All analytes were below the laboratory limit of reporting in the blank samples.	Yes
	QAQC – Internal Laboratory QAQC	A review of internal laboratory QAQC procedures is documented in Section 6 of the ESA report. A review of the internal laboratory QAQC results indicates that all samples were received and analysed within the acceptable holding times with the exception of pH, and all method blanks, internal duplicates, laboratory spikes and matrix spike relevant to the site were within the acceptable limits. The minor holding time exceedance for pH analysis is not considered to be significant and unlikely to impact on the results of the investigation.	Yes

4.3 Auditor's Opinion on the Adequacy of Previous Assessments

The Auditor considers that although data-gaps remain in relation to potential risk associated with dieldrin concentrations in soil at the site and the possible use of other herbicides in the cropping areas not included in the previous analytical suite, the information included in the previous investigations is sufficient on which to base the conclusions and recommendation of this PRSA.

5 Conceptual Site Model Summary

The Conceptual Site Model (CSM) represents site related information regarding the potential for contamination sources, migration pathways and receptors.

The requirement for the development of a conceptual site model (CSM) is provided in Schedule B2 and B4 of the NEPM (NEPC, 2013). The CSM represents site-related information regarding contamination sources, migration pathways and receptors.

The development of a CSM is a dynamic process and information and assessments relevant to the site model should be used to update and review the current CSM.

The essential elements of an initial CSM are:

- Known and potential sources of contamination and contaminants of concern;
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air) and contaminant transport and migration mechanisms;
- Potential human and ecological receptors; and
- Potential exposure pathways.

5.1 Potential Sources of Contamination and Contaminates of Concern Source Pathway Receptor Summary

Based on the site history review and site inspection, the below table summaries existing and historical on or off-site sources or activities that may have the potential to result in contamination. The table also identifies potentially affected media and list contaminants of potential concern (COPC) associated with each existing or historical source/activity.

Table 5-1 Summary of Potential Sources of Contamination and Contaminants of Concern

Potential Source Considered	Media that could be impacted	Potential Contaminants of Concern	Relevance to site
Historical Farming – Crop Farming (including potato farming)	Soil, groundwater, surface water	Metals, OCPs and OPPs	Concentrations of dieldrin have been reported above the adopted criterion for poultry and eggs for human consumption in areas where crop farming has occurred. Therefore, this potential source is considered to exist in areas of the site used for crop farming and is considered relevant for soil that could be used for future poultry and egg production in a residential setting.
Historical Farming – Grazing	Soil, groundwater, surface water	Nutrients, OCPs and OPPs	The site history indicates that areas of the site when not used for cropping were used for general grazing. However, general grazing uses are unlikely to result in contamination at the site and is therefore not considered relevant.
Historical Filling	Soil, groundwater, surface water	Metals, TRHs, BTEXN, PAHs, OCPs, OPPs and asbestos	The site history review and site inspection identified areas of filling. Sampling and analysis completed due to filling of a former dam in the northeast corner of at 91 – 125 Coriyule Road indicated that fill material in this area did not represent a source of contamination. However, areas of potential fill were also identified in the area immediately surrounding the derelict shed on 32 – 70 McDermott Road which have not been assessed. Therefore, this potential source is relevant in this area.

Potential Source Considered	Media that could be impacted	Potential Contaminants of Concern	Relevance to site
Storage of fuels and chemicals as part of farming practices	Soil, groundwater, surface water	Metals, hydrocarbons, nutrients	With the exception of the derelict shed located in the northern portion of the site. There was no evidence of storage sheds on the site, therefore this potential source is not considered to exist at the site
Animal pest control (e.g., sheep dips)	Soil, groundwater, surface water	Arsenic, pesticides	No evidence of sheep dips or other animal pest treatment on site, therefore this potential source is not considered to exist at the site
Septic tanks	Soil, groundwater, surface water	Nutrients, metals, E. coli	Although listed as not being present in the previous ESA report (ESA, 2019), a septic tank may be associated with the house on the southern property. The Auditor considers that providing any such septic tank is decommissioned in accordance with EPA Guideline 891.4, then the septic tank assessment is not required to form part of the Audit scope. This approach was discussed and agreed with EPA.

5.2 Potential Receptors

5.2.1 Environmental Values – Soil

The ERS, 2021, details the environmental values of land (i.e., soil) to be protected under a number of different land use scenarios and also provides environmental quality objectives for the protection of these environmental values.

The site is proposed to be used for residential purposes and is therefore consistent with the sensitive land use scenario (i.e., low density residential) and some areas of open space and recreation.

The environmental values of land applicable for the site are:

- Maintenance of ecosystems (modified to highly modified ecosystems)
- Human health
- Aesthetics
- Buildings and Structures
- Production of food, flora, and fibre

5.2.2 Environmental Values – Water

The ERS, 2021, defines the environmental values of water, including surface water (and associated sediments) and groundwater which must be protected. The environmental values of groundwater which must be protected are based on the groundwater salinity and the groundwater segment applicable. Groundwater of higher quality (lower salinity) has more environmental values then low quality (more saline) groundwater.

Based on the expected TDS, the most conservative groundwater segment likely encountered at the site is **Segment C.** Therefore, the environmental values of groundwater requiring protection are:

- Water dependent ecosystems
- Potable mineral water supply
- Agriculture and irrigation (stock watering)
- Industrial and commercial uses
- Water-based recreation (primary contact recreation)
- Traditional owners cultural values
- Buildings and structures
- Geothermal properties

The environmental values of water dependent ecosystems is applicable at the point of groundwater discharge, which is inferred to be Port Phillip Bay (Corio Bay) located 1.1 km to the north of the site.

As the site and depth to water are not located in an area of geothermic importance (i.e. temperatures of groundwater are unlikely to be between 30-70 degrees Celsius), and the natural quality of the groundwater is unlikely to be effervescent, the environmental values of geothermal properties and potable mineral water supply is not considered relevant.

As no surface water bodies are present on site, other than man-made dams and a gully which may include periodic surface water flows, the environmental values of surface water are not considered relevant on the site.

5.3 Summary of Potential Receptors and Migration Pathways

A summary of potential receptors based on the environmental values of the environment applicable at the site are summarised in **Table 5-2** and **Table 5-3**. This includes potential contaminant migration and exposure pathways, and whether the environmental values are likely to be impacted based on the historical use of the site.

Table 5-2 Environmental Values of Land, Potential Receptors and Migration and Exposure Pathways

Environmental Value	Potential Existing and Future Receptors		Potentially Affected Media, Migration and Exposure Pathways	Environmental Value Potentially Impacted
	On-site	Off-site		
Maintenance of ecosystems (modified to highly modified ecosystem)	**Yes** – Ecological receptors such as vegetation (trees, grasses)	**No** – Although ecological receptors exists off-site, they are unlikely to be impacted by soil contamination (if present) on-site.	Exposure by ecological receptors to contaminants through direct contact in soil. Exposure by future site users to contaminants through direct dermal contact and ingestion of soils (in unsealed areas). Secondary exposure by future site users to contaminants via consumption of potentially contaminated produce (chickens, eggs, vegetables etc.) Exposure by construction and maintenance workers to contaminants through direct dermal contact ingestion of soil.	**Yes** In areas of historical cropping and fill material
Human Health	**Yes** – receptors including future adult and child residents and users of open space and recreation	**Yes** – Receptors including surrounding members of the public, workers, and residents		**Yes** In areas of historical cropping and fill material
Aesthetics	**Yes** – receptors including future adult and child residents and users of open space and recreation	**Yes** – Receptors including surrounding members of the public, workers, and residents		**No**
Building and Structures	**Yes** – receptors including future residential buildings	**No**– Although buildings and structures exists off-site, they are unlikely to be impacted by soil contamination (if present) on-site.		**No**
Production of food, flora, and fibre	**Yes** – future residents may potentially grow produce (i.e., chickens, eggs, vegetable gardens and fruit trees)	**No -** Although receptors exists off-site, they are unlikely to be impacted by soil contamination (if present) on-site.		**Yes** In areas of historical cropping and fill material

Table 5-3 Environmental Value of Groundwater, Potential Receptors and Migration and Exposure Pathways

Environmental Value	Potential Existing and Future Receptors		Potential Migration and Exposure Pathways	Environmental Value Potentially Impacted
	On-site	Off-site		
Water dependent ecosystems	**No –** Surface water bodies located on-site include artificial waterways such as dams, therefore, this environmental value is unlikely to be applicable. It is noted that the gully may form an ephemeral creek at the site during high rainfall events, however, this likely flows into off-site artificial waterways (dam located to the west)	**Yes** – Port Phillip Bay (Corio Bay) is located approximately 1.1 km to the north of the site	Potential sources of contamination identified on-site are unlikely to result in groundwater contamination therefore potential impacts to environmental values of groundwater are likely to be negligible	**No**
Agriculture and Irrigation – Stock Watering	**Unlikely but possible –** No groundwater bores are registered for this use on-site. Although unlikely, this environmental value may still be relevant in the future	**Yes –** Several existing groundwater bores in the surrounding area are registered for domestic and stock uses. Therefore, this environmental value is considered to be relevant.		**No**
Industrial and Commercial Use	**No –** Based on the existing and proposed land use, this environmental value is unlikely to be realised.	**No –** Based on the surrounding land use which is predominantly residential and farming, this environmental value is unlikely to be realised.		**No**
Water-based recreation (primary contract recreation)	**Unlikely but possible -** No groundwater bores are registered for this use on-site. Although unlikely, this environmental value may still be relevant in the future	**Yes –** Several existing groundwater bores in the surrounding area are registered for domestic and stock uses. This may include domestic groundwater supply for filling of swimming pools. Therefore, this		**No**

Environmental Value	Potential Existing and Future Receptors		Potential Migration and Exposure Pathways	Environmental Value Potentially Impacted
	On-site	Off-site		
		environmental value is considered to be relevant.		
Traditional owners, cultural and spiritual values	**No –** groundwater is not expected to discharge to any surface water bodies on the site.	**Yes** – These environmental values may be applicable at Port Phillip Bay.		**No**
Buildings and structures	**No** – buildings and structures will be present on-site in the future but are unlikely to intercept groundwater	**No** – buildings and structures are present off-site but are unlikely to intercept groundwater		**No**

6 Summary and Findings

6.1 Land Classification

In accordance with the Planning Practice Note 30 (July 2021) and based on the site history reviewed as part of this PRSA, the site has a medium potential for contamination in some areas, due to known concentrations of dieldrin in surface soils exceeding the adopted criterion for human consumption of poultry and eggs, and areas of suspected filling which have not been assessed on the northern property. It is noted that the soil results for organochlorine pesticides, which were reviewed as part of this PRSA, do not exceed the criteria for low density residential land use (where poultry is not kept), nor do they exceed the criteria for public open space such as parks or playgrounds.

6.2 Likelihood of Contamination

Based on the PRSA, inclusive of review of information included within previous environmental assessment reports and the Auditor's site inspection, it is considered that it is likely that contamination is present at the site in some areas which may impact on the environmental values of the site under some planned future land use scenarios. As such, an Audit is recommended for parts of the site, which is further detailed in **Appendix A**.

6.3 Assessment of Possible Impacts on Environmental Values

The Auditor's assessment of possible impacts on the environmental values associated with the proposed use of the site are documented in the following tables.

Table 6-1 Assessment of Environmental Values of Land

Environmental Value	Auditors Assessments
Land dependent ecosystems and species	Environmental value is potentially impacted in areas where historical cropping has resulted in dieldrin concentrations exceeding the adopted criterion for human consumption of poultry and eggs, or in areas where importation of fill has occurred and has not been assessed as shown on the attached figures.
Human health	Environmental value is potentially impacted in areas where historical cropping has resulted in dieldrin concentrations exceeding the adopted criterion for human consumption of poultry and eggs, or in areas where importation of fill has occurred and has not been assessed as shown on the attached figures. It is noted that the soil results for organochlorine pesticides, which were reviewed as part of this PRSA, do not exceed the criteria for low density residential land use (where poultry is not kept), nor do they exceed the criteria for public open space such as parks or playgrounds.
Buildings and Structures	Environmental value is not considered likely to be impacted
Aesthetics	Environmental value is not considered likely to be impacted

Environmental Value	Auditors Assessments
Production of Food, Fibre and Flora	Environmental value is potentially impacted in areas where historical cropping has resulted in dieldrin concentrations exceeding the adopted criterion for human consumption of poultry and eggs, or in areas where importation of fill has occurred and has not been assessed as shown on the attached figures.

Table 6-2 Assessment of Environmental Values of Groundwater

Environmental Value	Auditors Assessments
Water dependent ecosystems and species	Environmental value is not considered likely to be impacted
Potable mineral water supply	Environmental value is not considered likely to be impacted and this environmental value is unlikely to apply at the site
Agriculture and irrigation (stock watering)	Environmental value is not considered likely to be impacted
Industrial and commercial use	Environmental value is not considered likely to be impacted
Water based recreation (primary contact recreation)	Environmental value is not considered likely to be impacted
Traditional Owner cultural values	Environmental value is not considered likely to be impacted
Buildings and structures	Environmental value is not considered likely to be impacted
Geothermal properties	Environmental value is not considered likely to be impacted and this environmental value is unlikely to apply at the site

6.3.1 Assessment of Environmental Values of Surface Water

Several dams exist at the site. In accordance with the ERS, 2021, environmental values of surface water do not apply at off-stream private dams. Regardless, environmental values of surface water are unlikely to be impacted by the historical use of the site.

6.4 Determination of an Environmental Audit

Based on the results of the PRSA and supporting information, including the previous environmental site assessments included in **Appendix B**, the Auditor is of the opinion that an environmental audit, to be conducted in accordance with Section 208 of the *Environment Protection Act 2017*, is required in some areas of the site for the proposed development which includes a low-density residential subdivision and open space use. This conclusion is based on the known presence of concentrations of organochlorine pesticides (including dieldrin) in surface soils exceeding the adopted criterion for human consumption of poultry and eggs, related to historical cropping activities, and also areas of suspected imported fill which have not been assessed in the northern property.

It is noted that the soil results for organochlorine pesticides, which were reviewed as part of this PRSA, do not exceed the criteria for low density residential land use (where poultry is not kept), nor do they exceed the criteria for public open space such as parks or playgrounds.

Areas of the site where cropping and filling has not historically occurred, and/or where environmental investigations completed to date have not identified contaminated soils, are not considered to require an environmental audit.

In view of the above, three PRSA Statements outlining the results and conclusion of the PRSA have been prepared as detailed in the table below. A copy of the PRSA statements is provided in **Appendix A**, including site plans showing where each PRSA statement is applicable.

Table 6-3 Summary of PRSA Statements

PRSA Statement	Area	Conclusions and Requirements
1	Entire property at 31 – 70 McDermott Road	• Historical cropping known to have occurred. • Concentrations of dieldrin reported in shallow soil samples exceeding the adopted criterion for human consumption of poultry and eggs. • Areas of filling in the vicinity of the derelict shed requiring further investigation/assessment. • **Environmental audit required** to assess potential risk due to dieldrin in soils and area of potential filling in the southern part of the site. In addition, some analysis of soils for herbicides is also required in former cropping areas, which was not fully conducted as part of the previous environmental site assessments.
2	Northern portion of property at 91 – 125 Coriyule Road	• Historical cropping known to have occurred. • Concentrations of dieldrin reported in shallow soil samples exceeding the adopted criterion for human consumption of poultry and eggs. • The former backfilled dam area in the north-east corner of the site has been assessed, which indicated this area is not potentially contaminated. • **Environmental audit required** to assess potential risk due to dieldrin in soils. In addition, some analysis of herbicides in soils is also required in former cropping areas, which was not fully conducted as part of the previous environmental site assessments.
3	Southern portion of property at 91 – 125 Coriyule Road	• Historical farming was only reported to comprise of cattle grazing. • No obvious areas of filling or other potential sources of contamination identified. • Previous investigations have not identified concentrations of contaminants of potential concern above the adopted site assessment criteria. • **No environmental audit is required**.

6.5 Assessment Exclusions

The PRSA did not include any exclusions relevant to the scope conducted.

7 Limitations

EHS Support has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Cardno Victoria Pty Ltd and only those third parties who have been authorised in writing by EHS Support to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated March 2022.

A PRSA is not an Environmental Audit in accordance with Section 208 of the Act. A PRSA, as defined by the EPA Guidelines and the Act, makes conclusions on the potential for contamination to be present at the site, and not the suitability of the site for the intended use.

The methodology adopted and sources of information used by EHS Support are outlined in this report. No indications were found during our investigations that information contained in this report as provided to EHS Support was false.

This report was prepared in September 2022 and is based on the conditions encountered and information reviewed at the time of preparation. EHS Support disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

This report contains information obtained by inspection, desktop site history investigation and review of previous environmental assessment reports completed by third parties. This information is directly relevant only to the information obtained at the time of the assessment.

Where conditions encountered at the site are subsequently found to differ significantly from those anticipated in this report, EHS Support must be notified of any such findings and be provided with an opportunity to review the recommendations of this report.

Whilst to the best of our knowledge information contained in this report is accurate at the date of issue, subsurface conditions, including groundwater levels can change in a limited time. Therefore, this document and the information contained herein should only be regarded as valid at the time of the investigation unless otherwise explicitly stated in this report.

8 References

Legislation

State of Victoria, Environment Protection Act 2017

State of Victoria, Environment Protection Regulations 2021, SR Number 47/2021 (25 May 2021)

State of Victoria, Environment Reference Standard, Victorian Government Gazette Number S245, 26 May 2021

Guidelines

Department of Environment, Land, Water and Planning (2021), Potentially Contaminated Land, Planning Practice Note 30, July 2021

EPA Victoria, 2021, Environmental Auditor Guidelines – Provision of statements and reports for environmental audits and preliminary risk screening assessments (EPA Publication 2022, August 2021)

EPA Victoria, 2022, Guidelines for conducting preliminary risk screen assessments (EPA Publication 2021), February 2022

Ministerial Direction No. 1 – Potentially Contaminated Land 2021

National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013)

Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds.

Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances.

Western Australian State Government, Department of Primary Industries and Regional Development, Chickens, eggs and organochlorines (https://www.agric.wa.gov.au/livestock-biosecurity/chickens-eggs-and-organochlorines)

Site Specific References

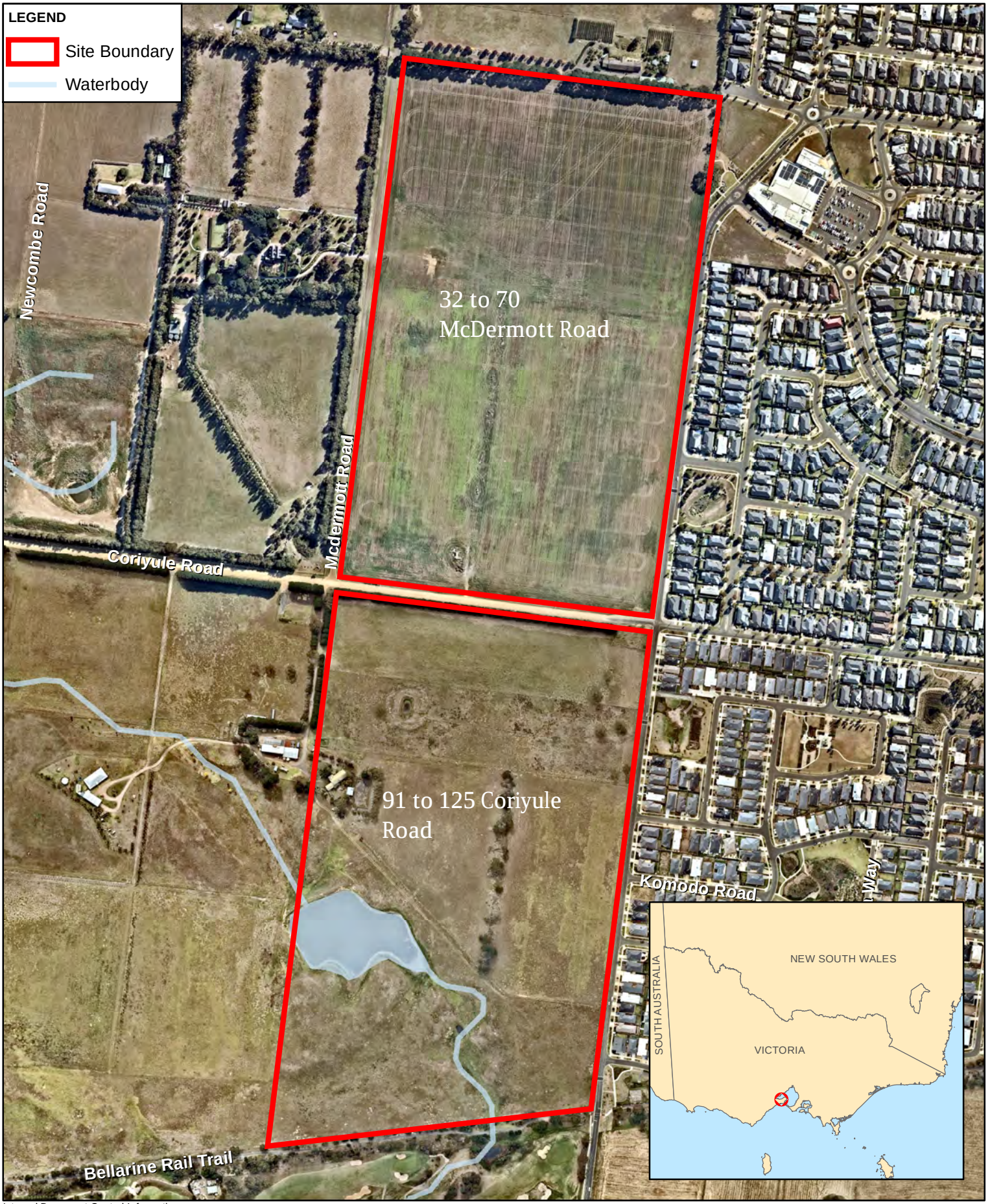
Australian and New Zealand Environment and Conservation Council (ANZECC), 1992. *Guidelines for the Assessment and Remediation of Contaminated Sites*.

Environmental Site Assessments Pty Ltd, 2019. Environmental Assessment *32-70 McDermott Road and 91 – 125 Coriyule Road, Curlewis*, 2019, prepared by Environmental Site Assessments Pty Ltd

Environmental Site Assessments Pty Ltd, 2022. *Environmental Investigation, 91 – 124 Coriyule Road, Curlewis*, 2022, prepared by Environmental Site Assessments Pty Ltd

Schulte, EE., K.A. Kelling, 1999. *Soil and applied manganese*. Understanding Plant Nutrients, A2526

Figures



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Site Plan

0 50 100 200 300 400 Meters

1 cm = 0 km [Page Size: A4]

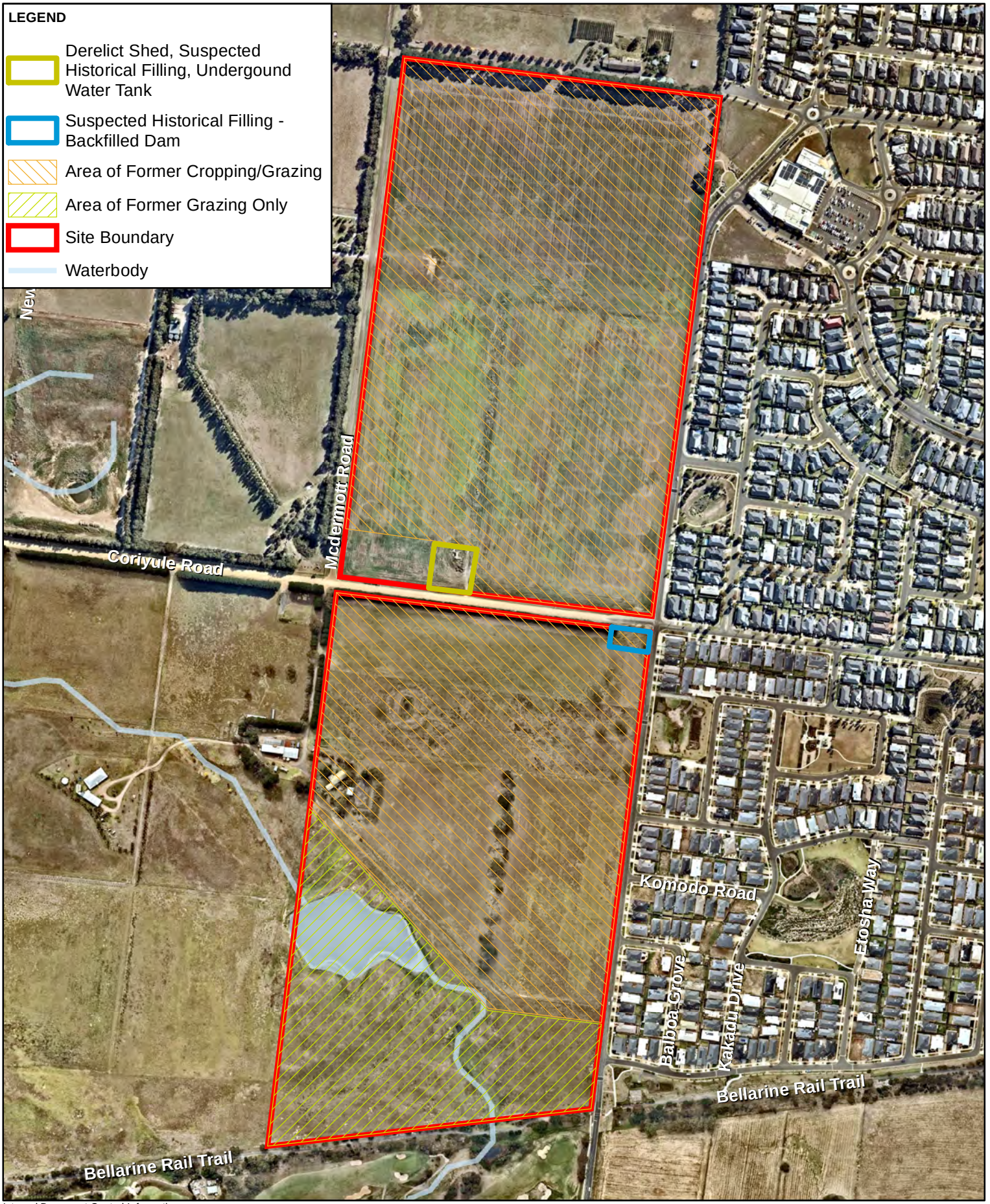
Jetty Road Stage 2 North PRSA

EHS Support

Figure 1

CREATED BY:	D. Barnes
APPROVED BY:	M. Russ
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:6,165
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

N



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Site Plan Showing Existing and Historical Features

0 50 100 200 300 400 Meters
1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

EHS Support

Figure 2

CREATED BY:	D. Barnes
APPROVED BY:	M. Russ
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:6,165
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

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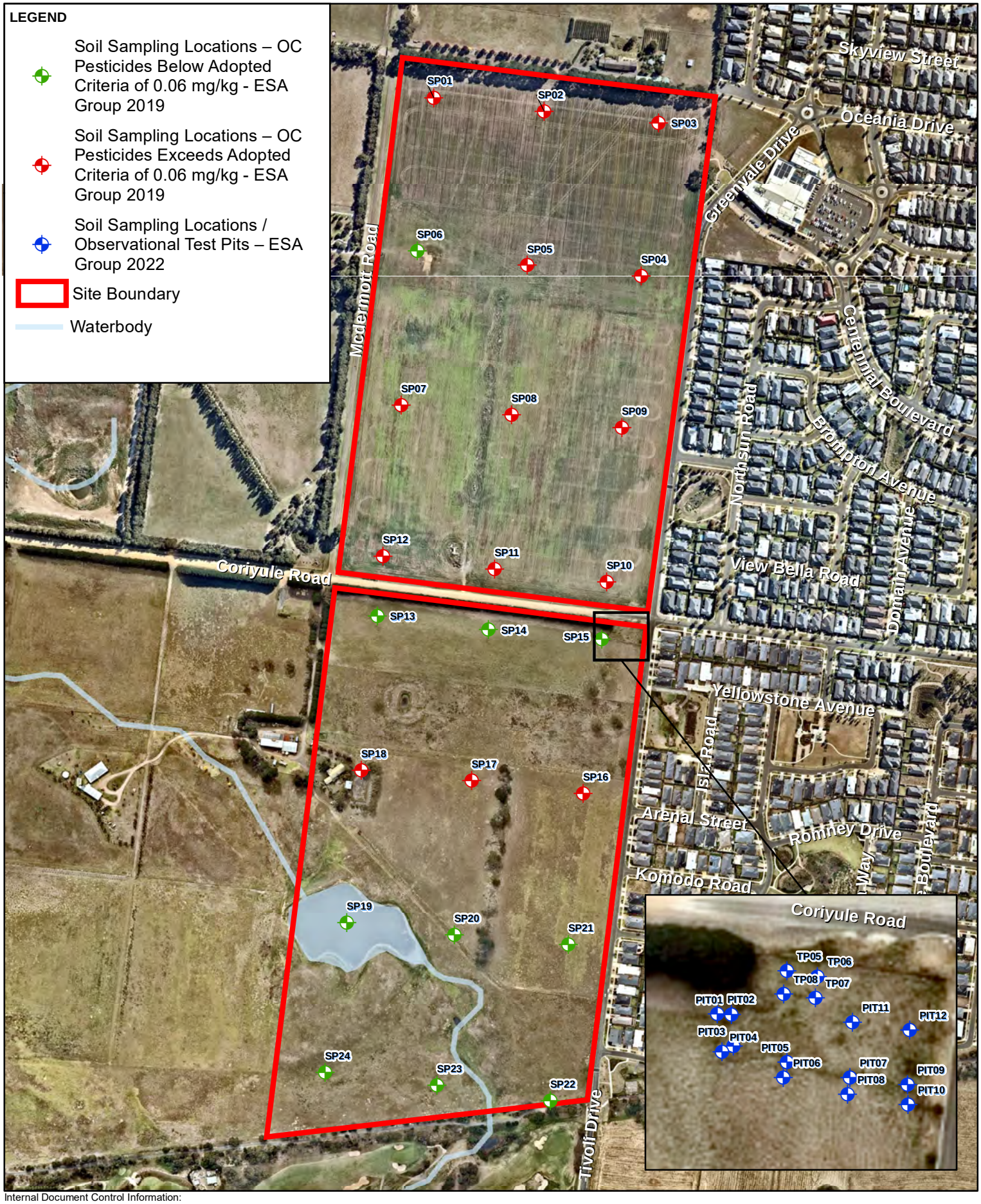

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Site Plan Showing Previous Soil Sampling Locations and Dieldrin Exceedances

0 50 100 200 300 400 Meters
1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

EHS Support

Figure 3

CREATED BY:	D. Barnes
APPROVED BY:	M. Russ
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:6,165
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

N

Appendix A Preliminary Risk Screen Assessment Statements

Appendix A1 PRSA Statement for 32 – 70 McDermott Road, Curlewis

Preliminary risk screen assessment statement

Under Part 8.3 of the *Environment Protection Act 2017*

Publication F1031.1 published February 2022

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 statement is not an environmental audit statement or an environmental audit report. It should not be construed as an environmental audit conducted to assess the suitability of land use.

This statement is a summary of the findings of a preliminary risk screen assessment conducted under Part 8.3 of the *Environment Protection Act 2017* for:

Jetty Road, Stage 2 – North

(32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis, VIC, 3222)

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:	Stephen Cambridge
Company:	EHS Support Pty Ltd
Address:	Level 4, 27-31 King St, Melbourne, VIC, 3000
Phone:	+61 400 349 009
Email:	stephen.cambridge@ehs-support.com

Site owner/occupant

Name:	Graham and Heather Moss, and Curlewis Bellarine Pty Ltd
Company:	-

Environmental auditor engaged by

Name:	Peter Preece
Company:	Cardno Victoria Pty Ltd
Relationship to site owner:	Planning consultant for owners

Reason for preliminary risk screen assessment

Planning scheme:	Not applicable. PRSA is to support Development Plan Overlay and later subdivision for residential use and open space recreation use.

Permit details (if applicable):	Not applicable
Other:	
☐ Permit is attached (if applicable):	

Section 2: Assessment scope

Site details

Address:	32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis, VIC, 3222 **Note**: this Statement and outcome only applies to part of the site for which the PRSA was conducted, defined as 32 – 70 McDermott Road, Curlewis, VIC, 3222. The area of the site subject to this Statement is provided in the attached PRSA Statement **Figure 1-1**
Title details:	32 – 70 McDermott Road: Lot 9 on Lot Plan 10309 and Lot 10 on Lot Plan 10309 91 – 125 Coriyule Road: Lot 1 on Title Plan 198964
Area (m^2):	520,057 (this is the entire Jetty Road Stage 2 North area).

☒ 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. Note, this is not a suitability of land use audit, rather an assessment to determine if an environmental audit is required for the land uses that apply to the specific PRSA.

Sensitive 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, the *Ministerial Direction No. 1* (MD No.1) considers secondary schools and children's playgrounds to be sensitive land uses.

☐ 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 land use categories

☒ 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**

Preliminary risk screen assessment statement

☐ 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, Victorian Government Gazette Number S245, 26 May 2021
- National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013)
- Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds.
- Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances.

Assumptions made during the assessment or any limitations

None

Exclusions from the assessment and the rationale for these

Ambient air and ambient sound environmental values have not been considered, because they are not relevant to the assessment of contaminated land

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

Title:	Preliminary Risk Screen Assessment – Jetty Road, Stage 2 – North, Curlewis, Victoria
Report no:	C03860_Jetty_Road_Stage_2_North_R01
Date:	19 September 2022

Section 3: Assessment outcome

Based on my assessment, I am of the opinion that an environmental audit is **required** for the following land uses, **including** the use or proposed use for which the site has been assessed:

Note: this statement and outcome only applies to part of the site, defined as 32 – 70 McDermott Road, Curlewis, VIC, 3222. The area of the site subject to this statement is provided in the attached PRSA statement **Figure 1-1**.

Sensitive 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, the MD No.1 considers secondary schools and children's playgrounds to be sensitive land uses.

☐ 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 land use categories

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

Other information

Note: the proposed use of the site is primarily low density residential with some recreation/open space included. Although the other landuses noted above are not currently proposed at the site, these landuses may also require an Environmental Audit to be completed.

Reason for environmental audit

An Environmental Audit is required based on the known presence of concentrations of organochlorine pesticides (including dieldrin) in surface soils exceeding the adopted criterion for human consumption of poultry and eggs, related to historical cropping activities. It is noted that the soil results for organochlorine pesticides, which were reviewed as part of this PRSA, do not exceed the criteria for low density residential landuse (where poultry is not kept), nor do they exceed the criteria for public open space such as parks or playgrounds. There are also areas of suspected imported fill which have not been assessed in southern part of the site in the vicinity of the shed in this part of the site. In addition, analysis of soils for herbicides is also required in former cropping areas, which was not conducted as part of the previous environmental site assessments.

Proposed scope of environmental audit

Site to be audited:	32 – 70 McDermott Road, Curlewis, VIC, 3222
Site/premises name	-
Address	32 – 70 McDermott Road, Curlewis, VIC, 3222
Title details	Lot 9 on Lot Plan 10309 and Lot 10 on Lot Plan 10309
Area (m^2)	261,065
Use or **proposed use** of the site to be audited:	Sensitive land use categories ☐ High density ☒ Residential land use ☐ Child care centre ☐ Pre-school ☐ Primary school ☐ Secondary school ☒ Other (lower density) ☐ Children's playground (indoor) ☐ Children's playground (outdoor) Other land use categories ☒ Recreation/open space ☐ Parks and reserves ☐ Agricultural ☐ Commercial ☐ Industrial ☐ Other land uses not captured by the above as described here:
Elements of the environment to be assessed in the environmental audit:	☒ Land ☒ all environmental values that apply to the land use category to be considered **OR** ☐ all environmental values that apply to the land use category, other than the following, to be considered:
	☐ Water ☐ Surface water ☐ all environmental values that apply to the segment to be considered **OR** ☐ all environmental values that apply to the segment, other than the following, to be considered: ☐ Groundwater ☐ all environmental values that apply to the segment to be considered **OR** ☐ all environmental values that apply to the segment, other than the following, to be considered:

Standards and reference documents to be considered:	• Environment Reference Standard, Victorian Government Gazette Number S245, 26 May 2021 • National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013) • Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds. • Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances. • Western Australian State Government, Department of Primary Industries and Regional Development, Chickens, eggs and organochlorines (https://www.agric.wa.gov.au/livestock-biosecurity/chickens-eggs-and-organochlorines)
Exclusions from the environmental audit and rationale for these:	Potential risk to environmental values of surface water and groundwater considered low based on the results of the PRSA. Consideration of these elements may be required depending on the results of further assessment completed as part of the environmental audit.
Assumptions made or limitations on the environmental audit:	The proposed scope of the Environmental Audit is based on the results of the PRSA conducted and the Auditor's opinion on the potential for contamination. This does not limit the Audit scope to be changed if different site conditions are encountered or the Auditor considers that other scope items are considered necessary to complete the Environmental Audit at that time.

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:	19 September 2022
Signed:	
Name:	Stephen Cambridge
	Environmental Auditor

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 29/08/22 4:57:13 PM; Document Path: J:\EHSS_GIS\AUSC03860_JettyRoadStage2\01_ANALYSIS\PRSA-Figure1.mxd

PRSA Statement Area

0 40 80 160 240 320 Meters
1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

EHS Support

Figure 1-1

CREATED BY:	D. Barnes
APPROVED BY:	M. Russ
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:5,000
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

N

Appendix A2 PRSA Statement for 91 – 125 Coriyule Road, Curlewis (Northern Section of Property)

Preliminary risk screen assessment statement

Under Part 8.3 of the *Environment Protection Act 2017*

Publication F1031.1 published February 2022

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 statement is not an environmental audit statement or an environmental audit report. It should not be construed as an environmental audit conducted to assess the suitability of land use.

This statement is a summary of the findings of a preliminary risk screen assessment conducted under Part 8.3 of the *Environment Protection Act 2017* for:

Jetty Road, Stage 2 – North

(32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis, VIC, 3222)

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:	Stephen Cambridge
Company:	EHS Support Pty Ltd
Address:	Level 4, 27-31 King St, Melbourne, VIC, 3000
Phone:	+61 400 349 009
Email:	stephen.cambridge@ehs-support.com

Site owner/occupant

Name:	Graham and Heather Moss and Curlewis Bellarine Pty Ltd
Company:	-

Environmental auditor engaged by

Name:	Peter Preece
Company:	Cardno Victoria Pty Ltd
Relationship to site owner:	Planning consultant for owner

Reason for preliminary risk screen assessment

Planning scheme:	Not applicable. PRSA is to support Development Plan Overlay and later subdivision for residential use and open space recreation use.

Permit details (if applicable):	Not applicable
Other:	
☐ Permit is attached (if applicable):	

Section 2: Assessment scope

Site details

Address:	32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis, VIC, 3222 **Note**: this Statement and outcome only applies to part of the site for which the PRSA was conducted, defined as the Northern part of 91 – 125 Coriyule Road, Curlewis, VIC, 3222. The area of the site subject to this Statement is provided in the attached PRSA Statement **Figure 1-2**.
Title details:	32 – 70 McDermott Road: Lot 9 on Lot Plan 10309 and Lot 10 on Lot Plan 10309 91 – 125 Coriyule Road: Lot 1 on Title Plan 198964
Area (m^2):	520,057

☒ 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. Note, this is not a suitability of land use audit, rather an assessment to determine if an environmental audit is required for the land uses that apply to the specific PRSA.

Sensitive 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, the *Ministerial Direction No. 1* (MD No.1) considers secondary schools and children's playgrounds to be sensitive land uses.

☐ 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 land use categories

☒ 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, Victorian Government Gazette Number S245, 26 May 2021
- National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013)
- Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds.
- Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances.

Assumptions made during the assessment or any limitations

None

Exclusions from the assessment and the rationale for these

Ambient air and ambient sound environmental values have not been considered, because they are not relevant to the assessment of contaminated land

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

Title:	Preliminary Risk Screen Assessment – Jetty Road, Stage 2 – North, Curlewis, Victoria
Report no:	C03860_Jetty_Road_Stage_2_North_R01
Date:	19 September 2022

Section 3: Assessment outcome

Based on my assessment, I am of the opinion that an environmental audit is **required** for the following land uses, **including** the use or proposed use for which the site has been assessed:

Note: this statement and outcome only applies to part of the site, defined as the northern part of 91 – 125 Coriyule Road, Curlewis, VIC, 3222. The area of the site subject to this statement is provided in the attached PRSA statement **Figure 1-2**.

Sensitive 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, the MD No.1 considers secondary schools and children's playgrounds to be sensitive land uses.

☐ 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 land use categories

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

Other information

Note: the proposed use of the site is primarily low density residential with some recreation/open space included. Although the other landuses noted above are not currently proposed at the site, these landuses would also require an Environmental Audit to be completed.

Reason for environmental audit

An Environmental Audit is required based on the known presence of concentrations of organochlorine pesticides (including dieldrin) in surface soils exceeding the adopted criterion for human consumption of poultry and eggs, related to historical cropping activities. It is noted that the soil results for organochlorine pesticides, which were reviewed as part of this PRSA, do not exceed the criteria for low density residential landuse (where poultry is not kept), nor do they exceed the criteria for public open space such as parks or playgrounds. In addition, analysis of soils for herbicides is also required in former cropping areas, which was not conducted as part of the previous environmental site assessments.

Proposed scope of environmental audit

Site to be audited:	Northern part of 91 – 125 Coriyule Road, Curlewis, VIC, 3222
Site/premises name	-
Address	Part of 91 – 125 Coriyule Road, Curlewis, VIC, 3222
Title details	Part of Lot 1 on Title Plan 198964
Area (m^2)	258,992
Use or proposed use of the site to be audited:	Sensitive land use categories ☐ 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 land use categories ☒ Recreation/open space ☐ Parks and reserves ☐ Agricultural ☐ Commercial ☐ Industrial ☐ Other land uses not captured by the above as described here:
Elements of the environment to be assessed in the environmental audit:	☒ Land ☒ all environmental values that apply to the land use category to be considered **OR** ☐ all environmental values that apply to the land use category, other than the following, to be considered:
	☐ Water ☐ Surface water ☐ all environmental values that apply to the segment to be considered **OR** ☐ all environmental values that apply to the segment, other than the following, to be considered: ☐ Groundwater ☐ all environmental values that apply to the segment to be considered **OR** ☐ all environmental values that apply to the segment, other than the following, to be considered:

Standards and reference documents to be considered:	• Environment Reference Standard, Victorian Government Gazette Number S245, 26 May 2021 • National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013) • Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds. • Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances. • Western Australian State Government, Department of Primary Industries and Regional Development, Chickens, eggs and organochlorines (https://www.agric.wa.gov.au/livestock-biosecurity/chickens-eggs-and-organochlorines)
Exclusions from the environmental audit and rationale for these:	Potential risk to environmental values of surface water and groundwater considered low based on the results of the PRSA. Consideration of these elements may be required depending on the results of further assessment completed as part of the environmental audit.
Assumptions made or limitations on the environmental audit:	The proposed scope of the Environmental Audit is based on the results of the PRSA conducted and the Auditor's opinion on the potential for contamination. This does not limit the Audit scope to be changed if different site conditions are encountered or the Auditor considers that other scope items are considered necessary to complete the Environmental Audit at that time.

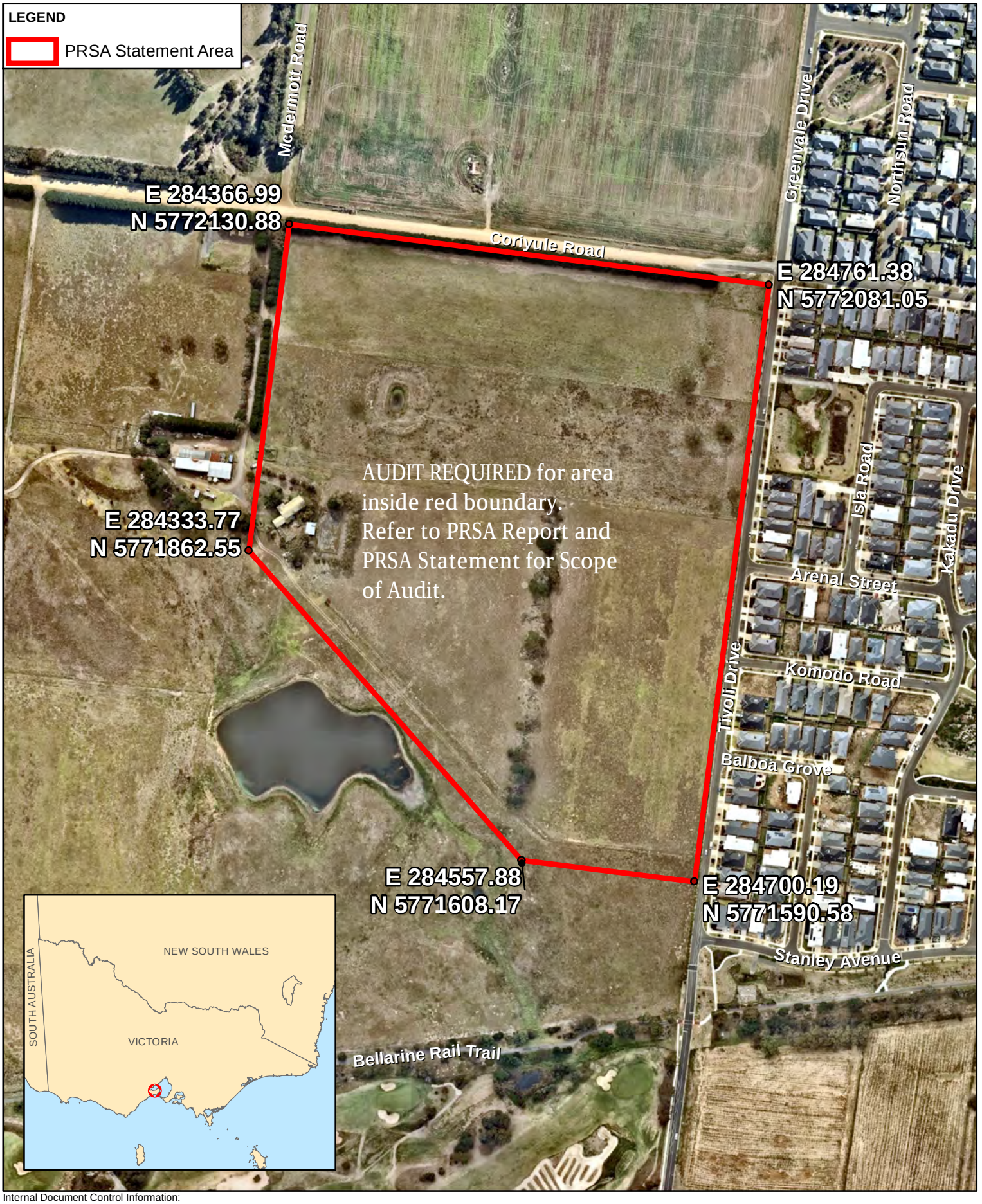
Note: An assessment that an environmental audit is not required does not include any comment on as to whether responsibilities under section 39 of the *Environment Protection Act 2017* (duty to manage contaminated land) exist for the person in management or control of the land. Please refer to EPA publication 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:	19 September 2022
Signed:	
Name:	Stephen Cambridge
	Environmental Auditor



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 29/08/22 5:08:35 PM; Document Path: J:\EHSS_GIS\AUSC03860_JettyRoadStage2\01_ANALYSIS\PRSA-Figure1_2.mxd

PRSA Statement Area

0 30 60 120 180 240 Meters

1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

EHS Support

Figure 1-2

N

CREATED BY:	D. Barnes
APPROVED BY:	M. Russ
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:4,000
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

Appendix A3 PRSA Statement for 91 – 125 Coriyule Road, Curlewis (Southern Section of Property)

Preliminary risk screen assessment statement

Under Part 8.3 of the *Environment Protection Act 2017*

Publication F1031.1 published February 2022

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 statement is not an environmental audit statement or an environmental audit report. It should not be construed as an environmental audit conducted to assess the suitability of land use.

This statement is a summary of the findings of a preliminary risk screen assessment conducted under Part 8.3 of the *Environment Protection Act 2017* for:

Jetty Road, Stage 2 – North

(32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis, VIC, 3222)

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:	Stephen Cambridge
Company:	EHS Support Pty Ltd
Address:	Level 4, 27-31 King St, Melbourne, VIC, 3000
Phone:	+61 400 349 009
Email:	stephen.cambridge@ehs-support.com

Site owner/occupant

Name:	Graham and Heather Moss and Curlewis Bellarine Pty Ltd
Company:	-

Environmental auditor engaged by

Name:	Peter Preece
Company:	Cardno Victoria Pty Ltd
Relationship to site owner:	Planning consultant for owner

Reason for preliminary risk screen assessment

Planning scheme:	Not applicable. PRSA is to support Development Plan Overlay and later subdivision for residential use and open space recreation use.

Permit details (if applicable):	Not applicable
Other:	
☐ Permit is attached (if applicable):	

Section 2: Assessment scope

Site details

Address:	32 – 70 McDermott Road and 91 – 125 Coriyule Road, Curlewis, VIC, 3222 **Note**: this Statement and outcome only applies to part of the site for which the PRSA was conducted, defined as the Southern part of 91 – 125 Coriyule Road, Curlewis, VIC, 3222. The area of the site subject to this Statement is provided in the attached PRSA Statement **Figure 1-3**.
Title details:	32 – 70 McDermott Road: Lot 9 on Lot Plan 10309 and Lot 10 on Lot Plan 10309 91 – 125 Coriyule Road: Lot 1 on Title Plan 198964
Area (m^2):	520,057

☒ 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. Note, this is not a suitability of land use audit, rather an assessment to determine if an environmental audit is required for the land uses that apply to the specific PRSA.

Sensitive 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, the *Ministerial Direction No. 1* (MD No.1) considers secondary schools and children's playgrounds to be sensitive land uses.

☐ 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 land use categories

☒ 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, Victorian Government Gazette Number S245, 26 May 2021
- National Environment Protection Council, 1999. National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013)
- Standards Australia, 2005, AS4482.1-2005, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds.
- Standards Australia, 1999, AS4482.2-1999, Australian Standard: Guide to the Investigation and Sampling of Potentially Contaminated Soil. Part 2: Volatile Substances.

Assumptions made during the assessment or any limitations

None

Exclusions from the assessment and the rationale for these

Ambient air and ambient sound environmental values have not been considered, because they are not relevant to the assessment of contaminated land

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

Title:	Preliminary Risk Screen Assessment – Jetty Road, Stage 2 – North, Curlewis, Victoria
Report no:	C03860_Jetty_Road_Stage_2_North_R01
Date:	19 September 2022

Section 3: Assessment outcome

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

Note: this statement and outcome only applies to part of the site, defined as the southern part of 91 – 125 Coriyule Road, Curlewis, VIC, 3222. The area of the site subject to this statement is provided in the attached PRSA statement **Figure 1-3.**

Sensitive 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, the MD No.1 considers secondary schools and children's playgrounds to be sensitive land uses.

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

☒ Other (lower density)

☒ Children's playground (indoor)

☒ Children's playground (outdoor)

Other land use categories

☒ Recreation/open space

☒ Parks and reserves

☒ Agricultural

☒ Commercial

☒ Industrial

☐ ~~Other land uses not captured by the above as described here:~~

Other information

Note: the proposed use of the site is primarily low density residential with some recreation/open space included. Although the other landuses noted above are not currently proposed at the site, these landuses would also not require an Environmental Audit to be completed.

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:	19 September 2022
Signed:	
Name:	Stephen Cambridge
	Environmental Auditor

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 29/08/22 5:10:37 PM; Document Path: J:\EHSS_GIS\AUSC03860_JettyRoadStage2\01_ANALYSIS\PRSA-Figure1_3.mxd

PRSA Statement Area

0 30 60 120 180 240 Meters

1 cm = 0 km [Page Size: A4]

Jetty Road Stage 2 North PRSA

EHS Support

Figure 1-3

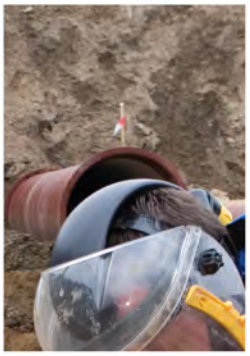
CREATED BY:	D. Barnes
APPROVED BY:	M. Russ
PROJECT REF. NO:	AUS_C03860
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA 1994 MGA Zone 55
SCALE:	1:4,000
AERIAL IMAGE SOURCE:	Nearmap Pty Ltd

N

Appendix B Previous Environmental Assessment Reports

Appendix B1 Environmental Assessment - 32-70 McDermott Road and 91-125 Coriyule Road, Curlewis (ESA, 2019)





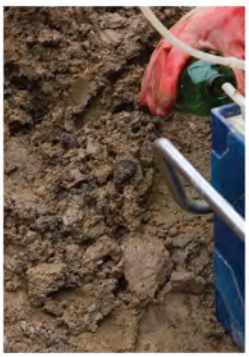


Environmental Assessment

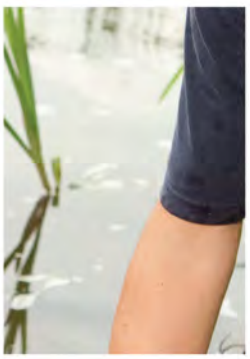
32-70 McDermott Rd & 91-125 Coriyule Rd, Curlewis

Prepared for:

Heather & Graham Moss / Curlewis Bellarine Pty Ltd








Environmental Site Assessments

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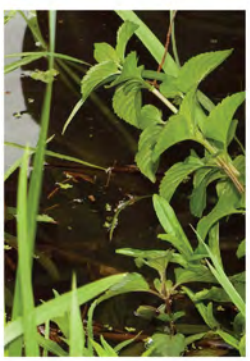

Document Control

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Report Title	Environmental Assessment – 32-70 McDermott Road and 91-125 Coriyule Road, Curlewis
Doc. Ref	ESA/370/2018
Client	Heather & Graham Moss / Curlewis Bellarine Pty Ltd
Signatures	Prepared and Authorised by:  Seton Lillas BSc *Waik.* Managing Director

Revision Status

Revision #	Status	Date	Writer
1	Final	22/02/19	S. Lillas

Documents Distribution

Revision #	Number of copies	Type	Recipient	Position and Company
1	1	Email	Chris Marshall	Group Manager (Town Planning) - TGM Group

Contents

Appendices

CONCLUSION OF ENVIRONMENTAL ASSESSMENT

Conclusions	There is a Low likelihood of chemical contamination of soil in the paddocks due to application of fertilisers and/or herbicides. There is a Low likelihood of contamination of soil at the Site due to industrial waste. There is a Low probability of occurrence of Acid Sulfate soils on Site. The Site is surrounded by low risk properties. There is no apparent soil staining, soil discolouration or odours at the Site. There is no apparent asbestos contamination. There is no apparent Prescribed Industrial Waste or Putrescible Waste. There is no apparent imported fill on Site.
Risk of Contamination	Based on all available information, this soil at the Site has a Low risk of contamination. All soils analysed were BELOW the upper thresholds for NEPM HIL A, HSL A/B, ESLs (Urban Residential) and Management Limits (Residential/Parkland). As per the Ministerial Direction No. 1, the Site is suitable for a sensitive use (defined as residential, child-care centre, pre-school centre or primary school), agriculture or public open space.

1.0 INTRODUCTION

Environmental Site Assessments Pty Ltd ('ESA') was engaged by Heather & Graham Moss / Curlewis Bellarine Pty Ltd ('the Client') to undertake an Environmental Assessment ('EA') at 32-70 McDermott Road and 91-125 Coriyule Road, Curlewis ('the Site'). The Site is currently zoned as Farming ('FZ').

The client plans to develop the Site for conventional residential use. The intention of the EA is to determine whether the Site is potentially contaminated.

Potentially contaminated land is defined in Ministerial Direction No. 1 – Potentially Contaminated Land, as land used or known to have been used for industry, mining or the storage of chemicals, gas, wastes or liquid fuel (if not ancillary to another use of land). This practice note also deals with land that may have been contaminated by other means such as by ancillary activities, contamination from surrounding land, fill using contaminated soil or agricultural uses.

Ministerial Direction No. 1 – Potentially Contaminated Land (Direction No. 1) requires planning authorities when preparing planning scheme amendments, to satisfy themselves that the environmental conditions of land proposed to be used for a sensitive use (defined as residential, child-care centre, pre-school centre or primary school), agriculture or public open space are, or will be, suitable for that use.

1.1 Project Understanding and Objectives

This EA will involve the collection and assessment of information derived from records of its previous use (preliminary study) and a Site inspection coupled with limited soil sampling.

Limited soil sampling is carried out to:

(a) Produce evidence through an investigation to indicate whether a Site is potentially contaminated; and

(b) Determine whether a Detailed Site Investigation ('DSI') should be conducted.[1]

[1] Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds AS 4482.1—2005.

1.2 Scope of Work Undertaken

Based on the project understanding and objectives described above, ESA undertook the following scope of works:

- The collection of historical information about the Site uses to assist in determining its potential for contamination;
- The collection of geological and hydrogeological information about the Site and its surroundings;
- A physical inspection of the Site;
- A limited soil-sampling program to provide an initial indication of the likely contamination status of the Site soils; and
- A report of the findings and recommendations.

2.0 PRELIMINARY STUDY

2.1 Site Details

The following table summarises the relevant details that describe the Site.

Site Address	32-70 McDermott Road and 91-125 Coriyule Road, Curlewis
Current Site Owner	Heather and Graham Moss (32-70 McDermott Road, Curlewis) Curlewis Bellarine Pty Ltd (91-125 Coriyule Road, Curlewis)
Current Title Volumes/Folios	5298/594 (32-70 McDermott Road, Curlewis) 10978/324 (91-125 Coriyule Road, Curlewis)
Municipality	Greater Geelong
Current Land Use Zonings	Farming
Current Site Uses	Farming
Lot and Plan Numbers	Lots 9 & 10 on PS010309 (32-70 McDermott Road, Curlewis) Lot 1 on TP198964M (91-125 Coriyule Road, Curlewis)
Area of Site (Approximate)	52 Ha

2.2 Current Use

The Site is currently being used for farming purposes (livestock and crops).

2.3 Surrounding Land Use

North	Farming
South	Special Use
East	General Residential and Commercial
West	Farming

2.4 Relevant Planning Information

Under the Greater Geelong planning scheme, the Site is currently zoned as Farming ('FZ'). Planning reports sourced from the Department of Planning and Community Development (www.dpcd.vic.gov.au/planning) are included in **Appendix 1.**

Per the planning reports, the Site is not currently subject to the requirements of an Environmental Audit Overlay ('EAO') or any other overlays.

2.5 Regional Geology

Per the Lotsearch report (**Appendix 2**) the geology on Site is:

- Brighton Group(Nb): Gravel, sand, silt: variably calcareous to ferruginous sandstones and coquinas; marine to nonmarine; and
- Source-bordering dune deposits (Qdi): Sand, silt, clay: inland dune deposits, some swamp deposits; mostly source-bordering.

Within 1 kilometre of the Site are Nb, Nubc and Qdi.

2.6 Potential Acid Sulfate Soils

Per the Lotsearch report (**Appendix 2**), the potential for ASS on Site is low (6-70%).

2.7 Regional Hydrogeology

Per the Lotsearch report (**Appendix 2**), the following is known about the hydrogeology for the Site and immediate surrounds.

Depth to Upper Aquifer	<5m BGL (9% of the Site) 5 - 10m BGL (60% of the Site) 10 - 20m BGL (31% of the Site)
TDS (mg/L)	3,500 – 7,000
Groundwater Beneficial Use Segment (per SEPP)	C
Surface Elevation above sea level (m AHD)	38 – 55
Inferred Groundwater Flow Direction	Northwest towards Port Phillip Bay

Table 2.7

Per the Lotsearch report (**Appendix 2**) there are 26 groundwater bores within a 2km radius of the Site.

The wells are used for the following purposes:

- Groundwater Investigation;
- Domestic; and
- Stock.

Per the Lotsearch report (**Appendix 2**), the lithology is:

- Silt material (significant); sand (significant); gravel material (significant); and
- Sand (significant); silt material (significant); clay lithology (significant)

2.8 Nearest Surface Water Bodies

There is a waterbody at the southwest of the Site. Port Phillip Bay is ~1km to the north of the Site.

2.9 Groundwater Quality Restricted Use Zones ('GQRUZ')

Per the Lotsearch report (**Appendix 2**) there are no zones within 1km of the Site.

2.10 Previous Investigations

There are no known previous investigations.

3.0 SITE HISTORY REVIEW

3.1 Title Information

Copies of Title Information are contained in **Appendix 3** and summarised in Table 3.1 below.

32-70 McDermott Road, Curlewis

Land	Volume/Folio	Parent Volume/Folio	Registered Proprietor/s	Date	Status
Lots 9 and 10 on Plan of Subdivision 010309	05298/594	03001/084	Graham Willis Moss & Heather Joyce Moss	07/09/2009	Current
			Graham Willis Moss	08/08/1979	History
			Edna May Nickelson, Freda Moss, Dulcie Mary Ward & Vernie Nash	25/06/1974	History
			Stanley Samuel Nash & Keith Nash	25/06/1974	History
			Stanley Nash (Farmer)	21/10/1929	History
			Reginald Benham, George Percy Benham, Edward Herbert Benham & William Northcote Benham	03/01/1929	History
			Aaron Benham (Farmer)	15/06/1927	History
Crown Portion Three, Parish of Bellarine, County of Grant	03001/084	02539/717 02673/589	Peter Paul McDermott (Farmer)	01/06/1915	History
			Thomas McDermott & Peter McDermott (Farmers)	16/01/1904	History
Crown Portions One, Two and Three, Parish of Bellarine, County of Grant	02539/717	01948/511 02083/593	Michael McDermott	30/07/1894	History

Land	Volume/Folio	Parent Volume/Folio	Registered Proprietor/s	Date	Status
Lots Eight, Nine and Ten on Plan of Subdivision 3907 Part of Crown Portions Two and Three, Parish of Bellarine, County of Grant	02673/589	01948/511 02083/593	Michael McDermott	30/12/1897	History
No Data	01948/511	Nil	No Data	No Data	History
Parts of Crown Portions Three and Four, Parish of Bellarine, County of Grant	02083/593	Nil	The Scarborough Estate and Land Investment Company Limited	23/06/1889	History
			The Reverend James Davy Dodgson (Minister)	03/01/1889	History

91-125 Coriyule Road, Curlewis

Land	Volume/Folio	Parent Volume/Folio	Registered Proprietor/s	Date	Status
Lot 1 on Title Plan 198964M	10978/324	09105/585	Curlewis Bellarine Pty Ltd	25/01/2018	Current
			Mark Ronald Chirgwin	15/09/1998	History
Lot 15 on Plan of Subdivision No. 10309, Part of Crown Portion Three, Parish of Bellarine, County of Grant	09105/585	05646/156	Patricia May Gwendoline Chirgwin	14/08/1975	History
Part of Crown Portion Three, Parish of Bellarine, County of Grant	05646/156	03001/084	Patricia May Gwendoline Chirgwin	16/12/1963	History
			Alan Leslie Whitcombe & Ian Maxwell Whitcombe (Farmers)	08/06/1950	History

Land	Volume/Folio	Parent Volume/Folio	Registered Proprietor/s	Date	Status
			Amelia Mary Howard	09/04/1930	History

Table 3.1

3.2 Historical Aerial Photographs

A range of aerial photographs are contained within the Lotsearch report (**Appendix 2**) and described below.

Year	Observations
1950	• There is one structure in the centre of the Site. • The Site appears to be used for farming purposes. • A tributary is apparent in the south of the Site.
1962	• Trees bordering the structure in the centre of the Site have been cleared. • A dam has been constructed in the west of the Site. • No other changes.
1964	• Dam in the west of the Site has been filled. • There is a new large waterbody at the southwest of the Site which the tributary appears to drain into. • No other changes.
1970	• No change from 1964.
1978	• The waterbody at the southwest has grown larger.
1984	• A new structure (house) is visible on the southwest of the Site. • The lake has reduced in size.
1990	• No change from 1984.
2012	• The lake has increased in size. • No other changes from 1984.

3.3 Cathodic Protection Systems

A request was made through Energy Safe Victoria ('ESV') regarding the presence of Cathodic Protection Systems on Site. ESV confirmed that there are no Cathodic Protection Systems registered for the Site. The ESV response can be found in **Appendix 4.**

3.4 Waste Management Facilities

Per the Lotsearch report (**Appendix 2**), there have been no Waste Management Facilities on or within 1km of the Site.

3.5 Former Gasworks

Per the Lotsearch report (**Appendix 2**), there have been no Gasworks on or within 1km of the Site.

3.6 Dry Cleaners, Motor Garages & Service Stations

Per the Lotsearch report (**Appendix 2**), there have been no Dry Cleaners, Motor Garages & Service Stations on or within 1km of the Site.

3.7 Historical Mining Activity – Shafts

Per the Lotsearch report (**Appendix 2**), there have been no Shafts on or within 1km of the Site.

4.0 EPA RECORDS SEARCH

4.1 Current and Former EPA Priority Sites Register ('PSR') Review

Per the Lotsearch report (**Appendix 2**), no Clean Up or Pollution Abatement Notices (relevant to land and/or groundwater contamination) have been issued to the owner or occupier of the Site. There were no properties within 1km of the Site listed on the current or former PSR.

4.2 Environmental Audit Reports

Per the Lotsearch report (**Appendix 2**), there have been no previous environmental audits on Site. There have been no environmental audits conducted within 1km of the Site.

4.3 Current and Former EPA Licensed Activities

Per the Lotsearch report (**Appendix 2**), there are no current or former EPA licensed activities or works approvals on or within 1km of the Site.

4.4 EPA Works Approvals

Per the Lotsearch report (**Appendix 2**), there are no current EPA licensed works approvals for the Site or within 1km.

4.5 EPA Prescribed Waste Database

Per the Lotsearch report (**Appendix 2**), there are no listed treaters or disposers on or within 1km of the Site.

4.6 EPA Victorian Landfill Register

Per the Lotsearch report (**Appendix 2**), there are no landfills on or within 1km of the Site.

5.0 SITE INSPECTION

Land Parcel Site Inspection Details	
Date and Time of Inspection	13 February 2019, 10.00 – 11.35 am
Weather Conditions	Fine
Current Site Uses	Crops and Livestock
Previous Site Uses	Farming
Site Coverage incl. condition and type of ground cover, e.g. bare ground, bitumen, concrete, gravel, etc.	Bare ground.
Current Adjacent Land Uses incl. the apparent condition of adjacent properties	Farming, Residential and Commercial. Good condition.
Details of Structures on Site incl. location and condition of all visible features, including foundations, positions of former buildings, tanks, pits, wells, drains and bores.	One vacant house on 91-125 Coriyule Road, Curlewis. No other structures.
Process Details (in relation to previous Site use)	Nil apparent.
Details of Chemical use incl. chemical storage and transfer areas, including the presence of waste or chemical containers	Nil apparent.

Presence of above ground storage tanks	Nil apparent.
Presence of underground storage tanks	Nil apparent.
Presence of septic tanks	Nil apparent.
Water use	Town supply.
Details of waste handling	Nil apparent.
Evidence of burning of burying of waste	Nil apparent.
Spill Incidents	Nil apparent.
Spill control systems, e.g. bund (materials of construction should be noted)	Nil apparent.
Locations of dispensing or fill points	Nil apparent.
Evidence of Fill Materials	Nil apparent.
Presence of any stockpiled material	Nil apparent.
Evidence of scrap and industrial or chemical waste	Nil apparent.
Evidence of settlement, subsidence and disturbed ground	Nil apparent.
Evidence of on Site or adjacent cut and fill activities or quarrying	Nil apparent.
Evidence of Contamination (discoloured soil, polluted water, affected plant growth)	Nil apparent.
Potential Asbestos containing material	Nil apparent.
Animal populations	Livestock.
Significant odours	Nil apparent.
Assessment of soil loss or deposition that has occurred in the past and evaluation of the future erosion potential	Nil apparent.
The direction of the flow of water run-off from the Site and adjacent properties	South.
The depth of any standing water, the direction and rate of flow of rivers, streams or canals, together with their flood levels and any tidal fluctuations	Nil apparent.
Transformers	Nil apparent.

6.0 POTENTIAL CONTAMINANTS OF CONCERN

According to AS4482.1[2], the Site has the following potential contaminants of concern due to its previous land uses:

- Fertilisers – Copper, Cadmium; and
- Herbicides – Arsenic, Mercury, Organochlorines, Organophosphates.

There were no instances of Asbestos Containing Material ('ACM') observed on Site.

Preliminary Study Conclusions and Recommendations	
Conclusions	There is a Medium likelihood of chemical contamination of surface soils in the paddocks due to application of fertilisers and/or herbicides. There is a Low likelihood of contamination of soil at the Site due to industrial waste. There is a Low probability of occurrence of Acid Sulfate soils on Site. The Site is surrounded by low risk properties. There is no apparent soil staining, soil discolouration or odours at the Site. There is no apparent asbestos contamination. There is no apparent Prescribed Industrial Waste or Putrescible Waste. There is no apparent imported fill on Site.
Risk of Contamination	Based on information collected to this point, soils at the Site have a Low-Medium risk of contamination.
Recommendations	Surface soil samples from the paddocks are required to discount impacts due to fertiliser/herbicide contamination.

7.0 SOIL SAMPLING PROGRAM

This sampling program was undertaken on Site on 13 February 2019. Soil samples were collected by ESA staff from the surface soils (0-0.15m BGL) by hand auger. The auger was cleaned between samples with phosphate free detergent and rinsed with deionised water. The approximate sampling points for the Site are shown in **Appendix 5**.

Table 7.0 illustrates the samples that were collected. The soil samples that were collected consisted of:

- CLAYEY SILT: Medium Plasticity, Dark Brown, Loose, Moist.

A Photoionisation Detector ('PID') was employed to screen samples for Volatile Organic Compounds ('VOC'). The following methodology was employed:

- A sample of soil was carefully collected with minimal disturbance that could cause loss of volatile constituents;
- The sample was immediately extruded into a plastic bag and sealed;
- The sealed bag containing the sample was crushed between the fingers to disperse the sample and release volatile constituents;
- The inlet tube of the PID was then inserted through a small opening in the bag into the headspace over the sample; and
- The PID response (in ppm) was measured within 2-3 seconds and the result recorded on the field form.#

The PID calibration form is attached as **Appendix 6.**

[2] AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil - Non-volatile and Semi-Volatile compounds

Sample ID	Sampling Point	Depth of Sample (m BGL)	Lab Analysis	PID (PPM)/Odour
SP01/0-0.15 QC03 QC04	SP01	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP02/0-0.15	SP02	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP03/0-0.15	SP03	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP04/0-0.15	SP04	0-0.15	NEPM Suite*	0.0/Nil
SP05/0-0.15	SP05	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP06/0-0.15	SP06	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP07/0-0.15	SP07	0-0.15	NEPM Suite*	0.0/Nil
SP08/0-0.15	SP08	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP09/0-0.15	SP09	0-0.15	NEPM Suite*	0.0/Nil
SP10/0-0.15	SP10	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP11/0-0.15	SP11	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP12/0-0.15	SP12	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP13/0-0.15	SP13	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP14/0-0.15	SP14	0-0.15	NEPM Suite*	0.0/Nil
SP15/0-0.15	SP15	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil

Sample ID	Sampling Point	Depth of Sample (m BGL)	Lab Analysis	PID (PPM)/Odour
SP16/0-0.15	SP16	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP17/0-0.15	SP17	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP18/0-0.15	SP18	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP19/0-0.15	SP19	0-0.15	NEPM Suite*	0.0/Nil
SP20/0-0.15	SP20	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP21/0-0.15	SP21	0-0.15	NEPM Suite*	0.0/Nil
SP22/0-0.15	SP22	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP23/0-0.15	SP23	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
SP24/0-0.15	SP24	0-0.15	OC/OP Pesticides including Dieldrin and 15 Metals**	0.0/Nil
QC01 (Trip Blank)	N/A	N/A	TRH C6-C10 & BTEXN	N/A
QC02 (Field Blank)	SP01	N/A	OC/OP Pesticides including Dieldrin and 15 Metals**	N/A
QC05 (Rinsate Blank)	SP24	N/A	OC/OP Pesticides including Dieldrin and 15 Metals**	N/A

Table 7.0

* = 15 Metals including As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn, TRH (C6-C36 or 40) / BTEXN, PAH/Phenols (16 PAHs & 12 Phenols), OC/OP Pesticides Including Triazine, Pesticides (Atrazine) and Bifenthrin, PCB, Cyanide – WAD, Chromium – Hexavalent (Alkaline Leach)

** = 15 Metals including As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn

The following sections describe the guidelines, standards and investigation methods adopted for the soil sampling program.

7.1 Relevant Guidelines and Standards

The sampling program was undertaken in accordance with the following guidelines, standards and policies:

- Australia Standard (AS 4482.1) - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile compounds (Standards Australia, 2005);
- Australia Standard (AS 4482.2) - Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances (Standards Australia, 1999);
- National Environment Protection (Assessment of Site Contamination) Measure 1999 (Amended); and
- State Environment Protection Policy (Prevention and Management of Contamination of Land) No. S95, EPA Victoria, June 2002.

7.2 Quality Assurance / Quality Control

7.2.1 Environmental Site Assessments Quality Assurance ('QA') Program

Environmental Site Assessments has developed and implemented a Quality Assurance Program in general accordance with the following guidelines:

- Australia Standard (AS 4482.1) - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile compounds (Standards Australia, 2005); and
- National Environment Protection Council (NEPC) - National Environment Protection (Assessment of Site Contamination) Measure (NEPM) - Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils, 1999 (Amended).

As part of the Quality Assurance Program, Environmental Site Assessments ensures that the following methodology is employed:

- The use of appropriately qualified and trained environmental scientists to perform intrusive works;
- The use of standardised field sheets to record the findings of the Site investigations;
- The collection and analysis of Quality Control samples as per AS 4482.1;
- The use of Chain of Custody procedures to ensure that sample integrity is maintained through the transport and handling stages; and
- Only using NATA accredited laboratories for the analysis of samples collected during the investigation activities.

As per the Environmental Site Assessments Quality Assurance Program, the following data quality indicators were used for the assessment of the laboratory analytical data:

- All sample analysis to be conducted using NATA registered methods in accordance with NEPM 1999 (Amended) guidelines;
- Laboratory method blank analysis required to be below the Limit of Reporting (LOR); and
- Surrogate compound concentrations required to be spiked at similar concentration to sample result.

7.2.2 Environmental Site Assessments Quality Control ('QC') Program

The overall precision of field quality control samples, laboratory split samples and laboratory duplicates is generally assessed by their Relative Percentage Difference (RPD), given by:

$$\frac{(C1 - C2)\ x\ 100}{\frac{(C1 + C2)}{2}}$$

Where:

C1 is the primary sample concentration.

C2 is the duplicate sample concentration.

The Relative Percentage Difference (RPD) of duplicated analysis were calculated and compared to the following criteria for acceptability. The acceptance criteria are listed in AS4482.1 (2005):

- Less than 30-50% for field duplicates (blind replicate and split samples);
- Less than 30% for laboratory duplicates where the detection is less than 10 times the LOR;
- Less than 20% for laboratory duplicates where the detection is greater than 10 times the LOR;
- RPDs for control spike duplicates will be compared to an acceptable limit of 20%;
- RPDs for matrix spike duplicates will be compared to an acceptable limit of 20%; and

- Percentage recoveries of control spikes and matrix spikes will be compared to an acceptable range of 70% – 130%. Where this range is exceeded, reference to the laboratories internal data quality objective limits will be made. In addition, percentage recoveries of surrogates will also be compared to the USEPA surrogate recovery limits.

7.2.3 Sample Documentation

All samples collected were labelled in a clear and precise way for proper identification in the field and for tracking in the laboratory.

The samples had identifiable and unique numbers. The sample labels contained the following information:

- Company name;
- Name of sampler;
- Sample ID; and
- Date/Time sample was collected.

Chain-of-custody forms were used to document sample collection and transport to laboratories for analysis. All sample transports for analysis were accompanied by a chain-of-custody form.

The chain-of-custody forms identified the contents of each transport and maintained the custodial integrity of the samples. The coolers in which samples were stored were sealed with self-adhesive custody seals. All custody seals were signed.

7.2.4 Packaging and Transport

All sample containers were placed in a plastic cooler. The following outlines the packaging procedures that were followed for samples:

- When ice was used, it was packed in zip-locked, double plastic bags. The drain plug of the cooler was sealed with fiberglass tape to prevent melting ice from leaking out of the cooler;
- The bottom of the cooler was lined with bubble wrap to prevent breakage during transport;
- All glass sample containers were enclosed in bubble wrap to prevent breakage;
- Where required, empty space in the cooler was filled with bubble wrap to prevent movement and breakage during transport;
- Ice used to cool samples was placed on top and around the samples to chill them to the correct temperature; and
- Each cooler was securely taped shut with signed custody seals.

7.2.5 Field Notes

The following information was recorded during the collection of each sample:

- Sample location and description;
- Sampling area sketch showing sample location and measured distances (where required);
- Sampler's name(s);
- Date and time of sample collection;
- Sample ID;
- Type of soil/material encountered (Fill, Natural etc.);
- PID readings;
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odours, colours etc.);
- Soil descriptions as per AS1726-1993; and
- Sample preservation details.

In addition to the sampling information, the following specific information was also recorded in the field logbook:

- Team members and their responsibilities;
- Time of arrival/entry on Site and time of Site departure;
- Other personnel on Site;
- Summary of any meetings or discussions;
- Deviations from sampling plans;
- Changes in personnel and responsibilities with reasons for the changes; and
- Calibration readings for any equipment used and equipment model and serial number.

7.3 Results of Analysis

Investigation levels and **screening levels** are the concentrations of a contaminant above which further appropriate investigation and evaluation will be required.

Investigation and screening levels provide the basis of Tier 1 risk assessment. A Tier 1 assessment is a risk-based analysis comparing Site data with generic investigation and screening levels for various land uses to determine the need for further assessment or development of an appropriate management strategy. The application of investigation and screening levels is subject to a range of limitations.

Health investigation levels ('HILs') have been developed for a broad range of metals and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure. The HILs are generic to all soil types and apply generally to a depth of 3m below the surface for residential use. Site-specific conditions should determine the depth to which HILs apply for other land uses.

Health screening levels ('HSLs') have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. The HSLs depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structures. They apply to different soil types, and depths below surface to >4m.

Ecological screening levels ('ESLs') have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon (TPH) fractions and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2m of soil.

Petroleum hydrocarbon management limits (**'management limits'**) are applicable to petroleum hydrocarbon compounds only. They are applicable as screening levels following evaluation of human health and ecological risks and risks to groundwater resources. They are relevant for operating Sites where significant sub-surface leakage of petroleum compounds has occurred and when decommissioning industrial and commercial Sites.

The laboratories used for conducting the soil analysis were Australian Laboratory Services Pty Ltd ('ALS') and Eurofins MGT ('MGT'). Both ALS and MGT are NATA certified for the analysis undertaken.

The comparison tables for laboratory results are attached in **Appendix 7**. All chain of custody forms, certificates of analysis and laboratory QA/QC documents are in **Appendix 8.** The laboratory report numbers are EM1902040 & 640789.

The laboratory results were compared with NEPM 1999 (Amended) guidelines for HIL A, HSL A/B, ESLs (Urban Residential) and Management Limits (Residential/Parkland).

The comparison results were as follows:

- There were no results in excess of NEPM HIL A, HSL A/B, ESLs (Urban Residential) and Management Limits (Residential/Parkland) upper thresholds.

As per the Ministerial Direction No. 1, the Site is suitable for a sensitive use (defined as residential, child-care centre, pre-school centre or primary school), agriculture or public open space.

7.4 Laboratory QA/QC

As part of their NATA accreditation, ALS and MGT perform internal duplicate analysis of samples for comparison of results to demonstrate precision. Laboratory standards including matrix spike samples, laboratory control samples and surrogates are also conducted as a basis to demonstrate accuracy. In addition, internal laboratory blank samples are run to assess the potential for laboratory equipment errors. The laboratory QA/QC results are attached in **Appendix 8.**

7.4.1 ALS Environmental Laboratory

- For all matrices, no Method Blank value outliers occur.
- For soil, Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For soil, Matrix Spike outliers occur.
- For all matrices, no Surrogate Recovery outliers occur.

7.4.2 Eurofins MGT Laboratory

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.

- For all matrices, no Matrix Spike outlier occur.
- For all matrices, no Surrogate Recovery outliers occur.

7.4.3 Sample Holding Times and Sample Receipt Temperature

Sample holding times were within acceptable ranges from collection to extraction. The documented temperature of samples upon receipt at the respective laboratory was within an acceptable range.

7.4.4 Conclusion

A review of the laboratory reports indicates that ALS and MGT have met their internal acceptance criteria for the quality control samples.

7.5 Field Quality Control Samples

7.5.1 Blind Replicate and Split samples

The relative percentage difference was calculated for the blind (QC03) and split samples (QC04). The comparison table is attached to **Appendix 7.**

For the blind sample there were no RPD exceedances.

For the split sample there were no RPD exceedances.

7.5.2 Trip, Field and Rinsate Blanks

Trip blanks (QC01) evaluate if the transport and handling procedures are introducing contaminants into the samples, and if cross contamination in the form of VOC migration has occurred between the collected samples. Field blanks (QC02) evaluate whether contaminants have been introduced into the samples during the sampling due to contamination from sample containers. Equipment rinsate blanks (QC05) evaluate field sampling and decontamination procedures.

Analysis of these quality control samples indicate that transport and handling, sample containers and decontamination procedures have not resulted in cross-contamination of the collected soil samples. The table of results is attached in **Appendix 7.**

There were no analyte levels greater than the limit of reporting ('LOR').

8.0 REFERENCES

- Ministerial Direction No. 1 – Potentially Contaminated Land ('Direction No. 1')
- National Environment Protection Council 1999 (As Amended) - National Environment Protection (Assessment of Site Contamination) Measure – Guideline on Investigation Levels for Soil and Groundwater.
- Standards Australia. 2005. AS 4482.1, Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non-volatile compounds. Standards Association of Australia
- Standards Australia. 1999. AS4482.1, Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances. Standards Association of Australia

DISCLAIMER

This disclaimer, together with any limitations specified in the report, applies to use of this report.

This report was prepared in accordance with a contracted scope of services. There were a series of cost, time and other constraints which have affected the accuracy and completeness of investigations undertaken.

This report has been prepared solely for use by, and is confidential to; the client who contracted the scope of services and Environmental Site Assessments accepts no responsibility for its use by other persons.

The contract for the preparation of this report contains express limitations upon the liability of Environmental Site Assessments which should be considered carefully. This report is subject to copyright protection and the copyright owner reserves its rights. This report does not constitute legal advice.

This report must be read in conjunction with the Statement of Qualifications and Limitations contained within it.

STATEMENT OF QUALIFICATIONS AND LIMITATIONS

It is not possible to identify all contamination or potential contaminants in or under the surface of the Site. This is an intrinsic risk when investigating potentially and contaminated Sites. As such, Environmental Site Assessments has prepared the following information which details the limitations of this environmental report.

In preparing this report, Environmental Site Assessments has relied on client/ third party information which was not verified by Environmental Site Assessments and Environmental Site Assessments does not accept responsibility for omissions or inaccuracies in the client/ third party information.

This report is based solely on the specific instructions received from its client and/or the scope of work agreed between Environmental Site Assessments and its client. Those instructions and/or scope of work may not be fully described in this report.

This report is based on the Site conditions identified at the time of inspection. It is not possible to identify all contamination or potential contaminants in or under the surface of the Site.

Investigations undertaken in respect of this report may have been constrained by the particular Site conditions, such as the location of buildings, services and vegetation. Further, changes that may have occurred after inspection.

As a result of these matters, not all relevant Site history, contaminants or potential for contamination may have been identified in this report. No warranties express or implied, as to the accuracy or completeness of the matters contained within it are made.

Although normal standards of professional practice have been applied, the absence of any identified potential for air, soil or groundwater impacts on the subject property should not be interpreted as a conclusion that impacts do not exist on the Site.

Subsurface conditions can vary across a particular Site, which cannot be wholly defined by investigation.

As a result, it is unlikely that the results and estimations presented in this report will reflect the extremes of conditions within the Site. Subsurface conditions including impact concentrations can change in a limited period of time. Any information provided may be based on "spot" tests. Conditions may vary between or beyond those locations from the interpreted conditions based on the actual data.

The analyses, evaluations, opinions and conclusions presented in this report are based on the information provided, and they could change if the information is in fact found to be unrepresentative of conditions between sampling and analysis locations.

The assessment and remediation of contamination is a developing science. Clean Up technology is constantly changing as scientific information on data collection, risk assessment, toxicology and remediation technologies are published. Further, opinions can vary as to the criterion for whether particular conditions constitute contamination, and if so how that contamination should be addressed or remediated. Different persons might reasonably or otherwise form opinions different to those of Environmental Site Assessments.

Use of the Site for any purpose may require planning and other approvals and, in some cases, EPA and accredited Site auditor approvals. Environmental Site Assessments offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for significant environment works.

The ongoing use of the Site or use of the Site for a different purpose may require the owner/ user to manage and/ or remediate Site conditions, such as contamination and other conditions, including but not limited to conditions referred to in this report. This report is not intended to be used for the purposes of tendering, programming of works, refurbishment works or demolition works unless used in conjunction with a specification detailing the extent of the works.

To ensure its contextual integrity, the report must be read in its entirety and should not be copied, distributed or referred to in part only. Environmental Site Assessments makes no determination or recommendation regarding a decision whether to acquire or provide financing with respect to the Site.

Environmental Site Assessments

Appendix 1: Property Reports

Property Report from www.land.vic.gov.au on 19 December 2018 12:03 PM

Address: 32-70 MCDERMOTT ROAD CURLEWIS 3222
Lot and Plan Number: This property has 2 parcels. See table below.
Standard Parcel Identifier (SPI): See table below.
Local Government (Council): GREATER GEELONG **Council Property Number:** 256372
Directory Reference: Melway 456 B10

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.

Further information about the building control system and building in bushfire prone areas can be found in the Building Commission section of the Victorian Building Authority website www.vba.vic.gov.au

Parcel Details

Lot/Plan or Crown Description	SPI
Lot 9 LP10309	9\LP10309
Lot 10 LP10309	10\LP10309

State Electorates

Legislative Council: WESTERN VICTORIA
Legislative Assembly: BELLARINE

Utilities

Rural Water Corporation: Southern Rural Water
Urban Water Corporation: Barwon Water
Melbourne Water: outside drainage boundary
Power Distributor: POWERCOR (Information about choosing an electricity retailer)

Planning Zone Summary

Planning Zone: FARMING ZONE (FZ)
SCHEDULE TO THE FARMING ZONE (FZ)
Planning Overlay: None
Areas of Aboriginal Cultural Heritage Sensitivity:
All or part of this property is an 'area of cultural heritage sensitivity'.

Planning information continued on next page

Planning scheme data last updated on 11 December 2018.

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 Planning Schemes Online

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

The Planning Property Report includes separate maps of zones and overlays

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 Planning Maps Online

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

Heritage Register data last updated on 26 November 2018.

This report is NOT a **Heritage Certificate** issued pursuant to Section 50 of the Heritage Act 1995.
It does not show places which may be under consideration for inclusion in the Victorian Heritage Register.

For more information on the **Victorian Heritage Register** go to Victorian Heritage Database

Other information about the heritage status of this property, how to obtain a Heritage Certificate, and any heritage approvals that may be required, may be obtained from Heritage Victoria

Areas of Aboriginal Cultural Heritage Sensitivity

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2018, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

Under the Aboriginal Heritage Regulations 2018, 'areas of cultural heritage sensitivity' are one part of a two part trigger which require a 'cultural heritage management plan' be prepared where a listed 'high impact activity' is proposed.

If a significant land use change is proposed (for example, a subdivision into 3 or more lots), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to http://www.aav.nrms.net.au/aavQuestion1.aspx

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018, can also be found here - https://www.vic.gov.au/aboriginalvictoria/heritage/planning-and-heritage-management-processes.html

Area Map

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

From www.planning.vic.gov.au on 19 December 2018 12:03 PM

PROPERTY DETAILS

Address:	**32-70 MCDERMOTT ROAD CURLEWIS 3222**
Lot and Plan Number:	**Lot 9 LP10309**
Standard Parcel Identifier (SPI):	**9\LP10309**
Local Government Area (Council):	**GREATER GEELONG** www.geelongaustralia.vic.gov.au
Council Property Number:	**256372**
Planning Scheme:	**Greater Geelong** planning-schemes.delwp.vic.gov.au/schemes/greatergeelong
Directory Reference:	**Melway 456 B10**

This property has 2 parcels. For full parcel details get the free Basic Property report at Property Reports

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Barwon Water**
Melbourne Water:	**outside drainage boundary**
Power Distributor:	**POWERCOR**

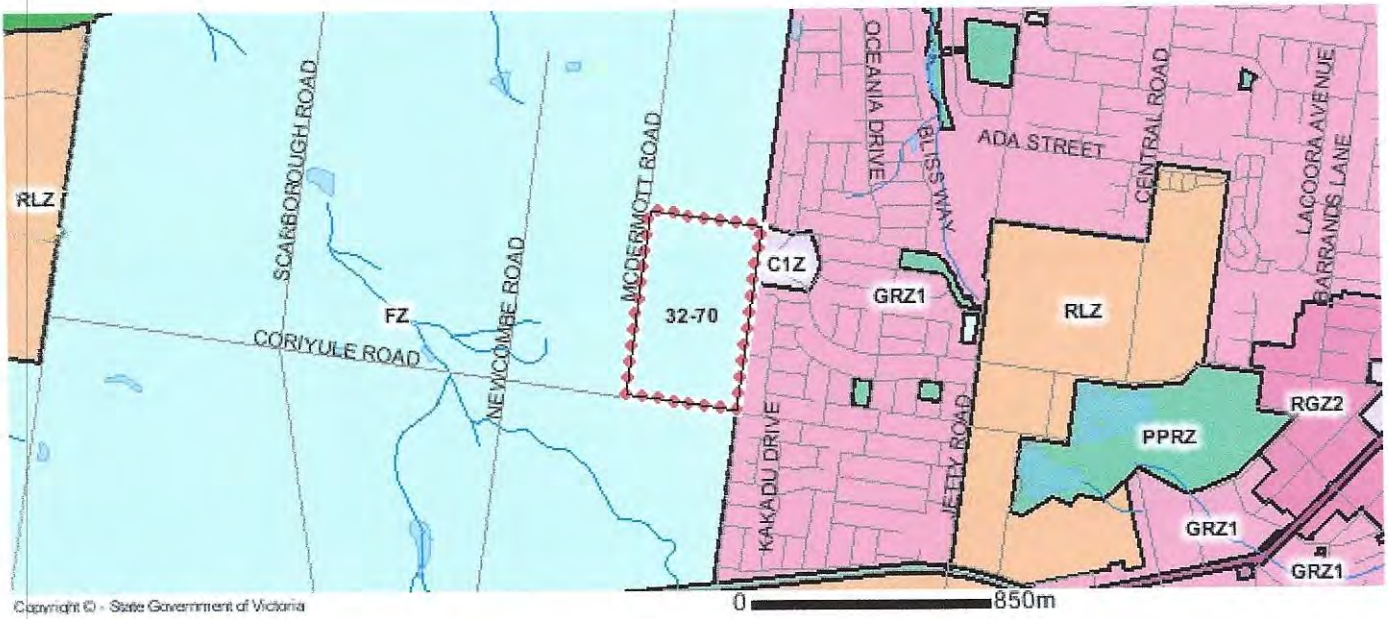
STATE ELECTORATES

Legislative Council:	**WESTERN VICTORIA**
Legislative Assembly:	**BELLARINE**

Planning Zones

FARMING ZONE (FZ)

SCHEDULE TO THE FARMING ZONE (FZ)



C1Z - Commercial 1
C2Z - Commercial 2
FZ - Farming
GRZ - General Residential
PCRZ - Public Conservation & Resource
PPRZ - Public Park & Recreation
PUZ1 - Public Use - Service & Utility
RDZ1 - Road - Category 1
RGZ - Residential Growth
RLZ - Rural Living

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

PLANNING PROPERTY REPORT

Planning Overlay

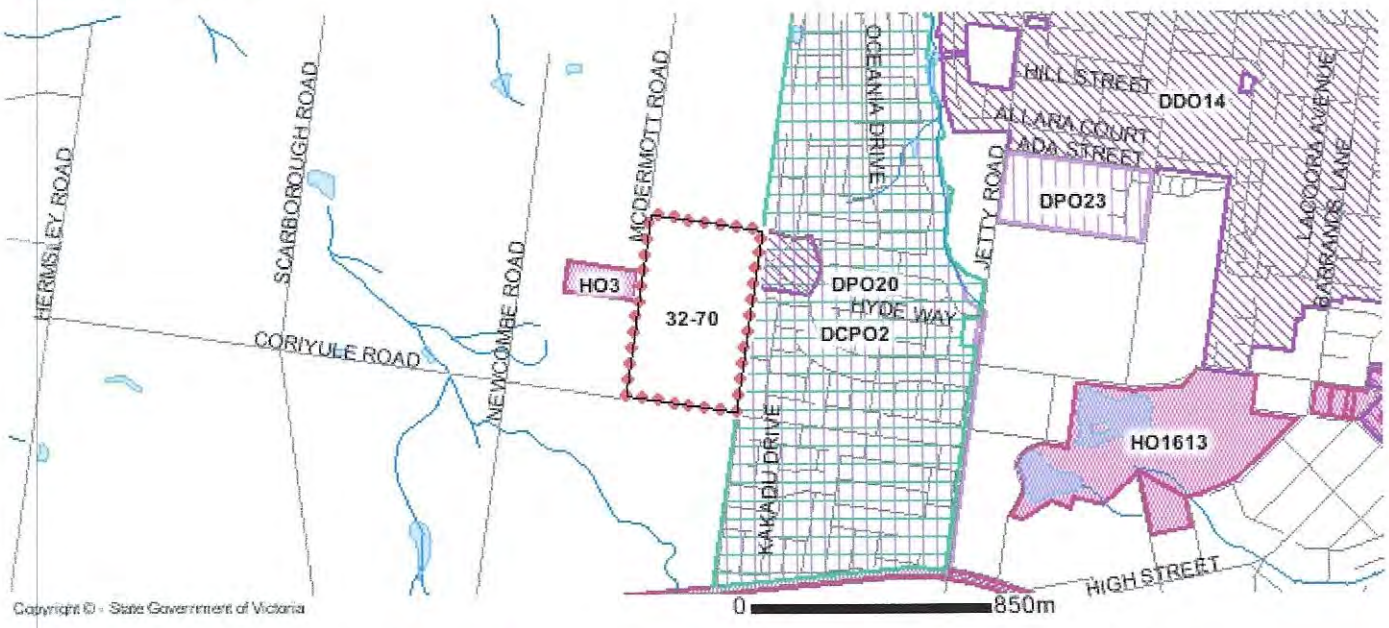
None affecting this land - there are overlays in the vicinity

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY (DCPO)

DESIGN AND DEVELOPMENT OVERLAY (DDO)

DEVELOPMENT PLAN OVERLAY (DPO)

HERITAGE OVERLAY (HO)



DCPO - Development Contributions Plan

DDO - Design and Development

DPO - Development Plan

HO - Heritage

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

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Areas of Aboriginal Cultural Heritage Sensitivity

All or part of this property is an 'area of cultural heritage sensitivity'.

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2018, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

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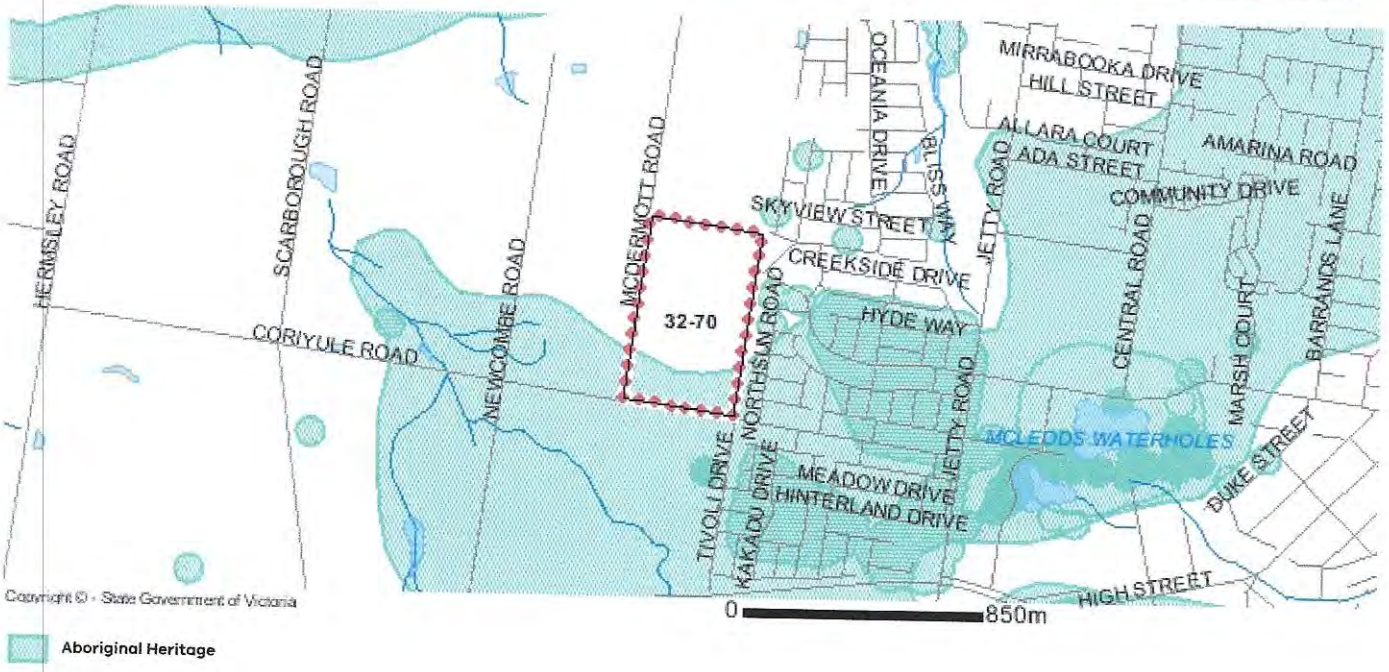

PLANNING PROPERTY REPORT

Further Planning Information

Planning scheme data last updated on 11 December 2018.

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

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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 http://mapshare.maps.vic.gov.au/vicplan

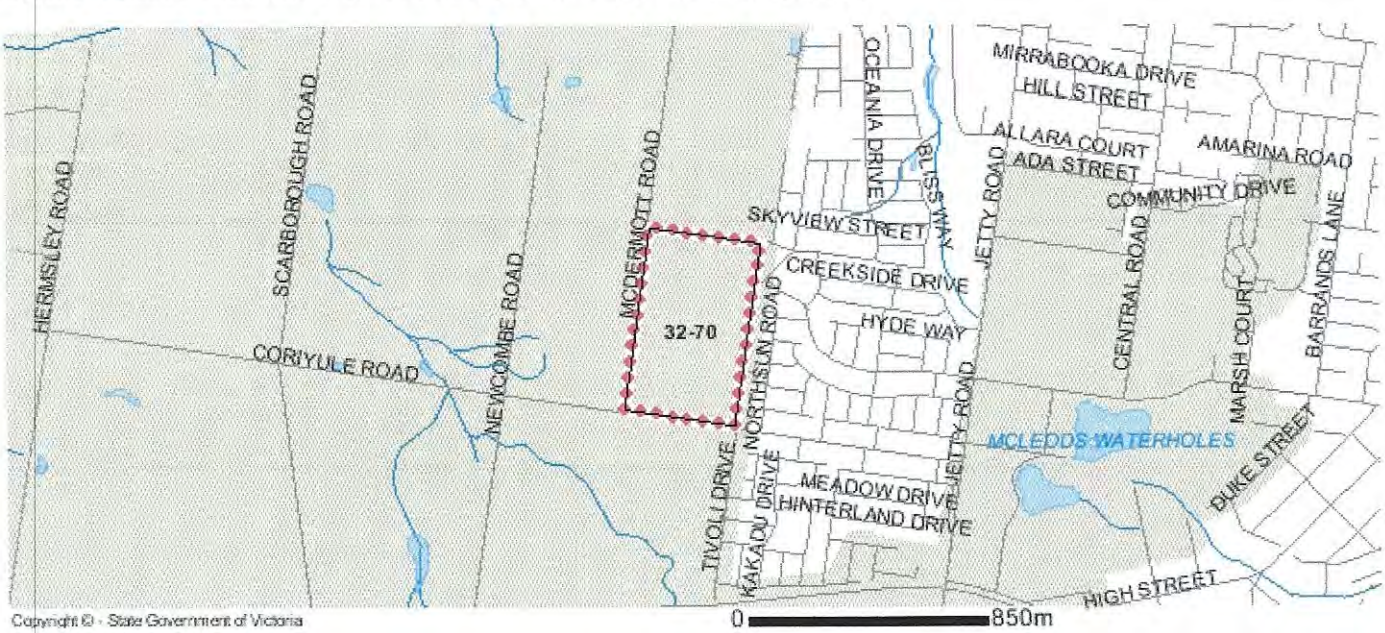
For other information about planning in Victoria visit https://www.planning.vic.gov.au

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Designated Bushfire Prone Area

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.



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Designated Bushfire Prone Area

Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011 and amended from time to time.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at http://mapshare.maps.vic.gov.au/vicplan or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website www.vba.vic.gov.au

Copies of the Building Act and Building Regulations are available from www.legislation.vic.gov.au

For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au

Property Report from www.land.vic.gov.au on 19 December 2018 12:04 PM

Address: 91-125 CORIYULE ROAD CURLEWIS 3222
Lot and Plan Number: Lot 1 TP198964
Standard Parcel Identifier (SPI): 1\TP198964
Local Government (Council): GREATER GEELONG **Council Property Number:** 267421
Directory Reference: Melway 456 C10

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.

Further information about the building control system and building in bushfire prone areas can be found in the Building Commission section of the Victorian Building Authority website www.vba.vic.gov.au

State Electorates

Legislative Council: WESTERN VICTORIA
Legislative Assembly: BELLARINE

Utilities

Rural Water Corporation: Southern Rural Water
Urban Water Corporation: Barwon Water
Melbourne Water: outside drainage boundary
Power Distributor: POWERCOR (Information about choosing an electricity retailer)

Planning Zone Summary

Planning Zone: FARMING ZONE (FZ)
SCHEDULE TO THE FARMING ZONE (FZ)
Planning Overlay: None
Areas of Aboriginal Cultural Heritage Sensitivity:
All or part of this property is an 'area of cultural heritage sensitivity'.

Planning information continued on next page

Land
.vic.gov.au

Planning scheme data last updated on 11 December 2018.

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Areas of Aboriginal Cultural Heritage Sensitivity

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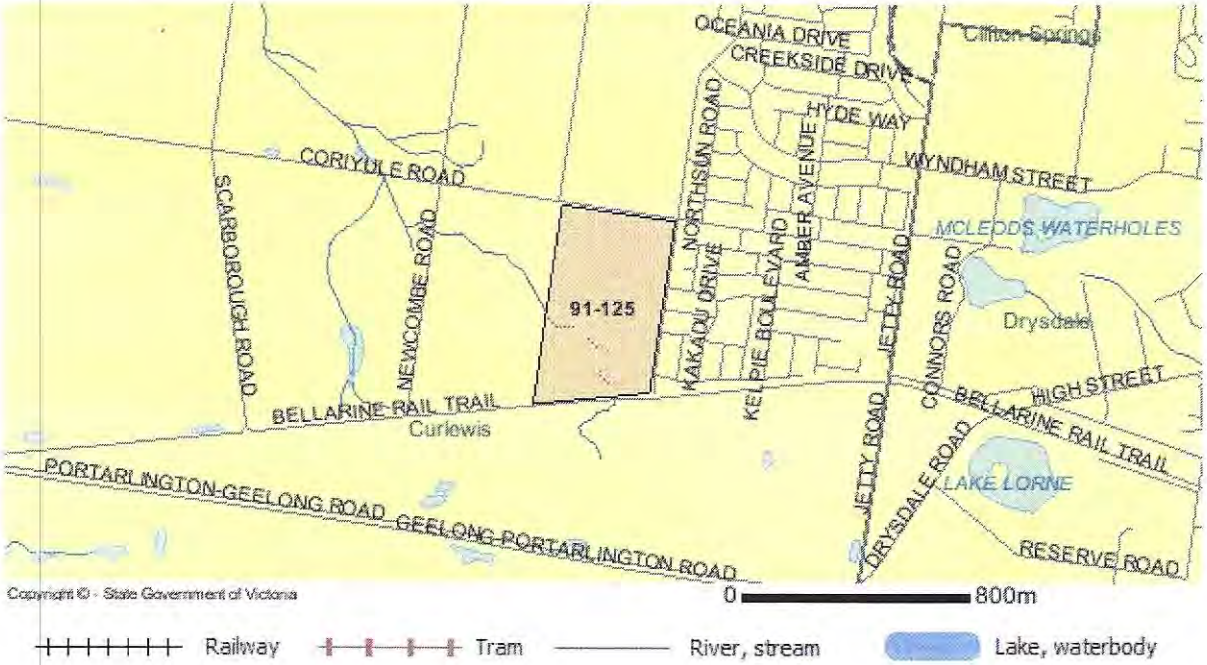
Area Map



PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

From www.planning.vic.gov.au on 19 December 2018 12:04 PM

PROPERTY DETAILS

Address:	**91-125 CORIYULE ROAD CURLEWIS 3222**
Lot and Plan Number:	**Lot 1 TP198964**
Standard Parcel Identifier (SPI):	**1\TP198964**
Local Government Area (Council):	**GREATER GEELONG** www.geelongaustralia.vic.gov.au
Council Property Number:	**267421**
Planning Scheme:	**Greater Geelong** planning-schemes.delwp.vic.gov.au/schemes/greatergeelong
Directory Reference:	**Melway 456 C10**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Barwon Water**
Melbourne Water:	**outside drainage boundary**
Power Distributor:	**POWERCOR**

STATE ELECTORATES

Legislative Council:	**WESTERN VICTORIA**
Legislative Assembly:	**BELLARINE**

Planning Zones

FARMING ZONE (FZ)

SCHEDULE TO THE FARMING ZONE (FZ)

C1Z - Commercial 1
C2Z - Commercial 2
FZ - Farming
GRZ - General Residential
PPRZ - Public Park & Recreation
PUZ1 - Public Use - Service & Utility
PUZ4 - Public Use - Transport
RDZ1 - Road - Category 1
RGZ - Residential Growth
RLZ - Rural Living
SUZ - Special Use

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

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Planning Overlay

None affecting this land - there are overlays in the vicinity

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY (DCPO)

DESIGN AND DEVELOPMENT OVERLAY (DDO)

DEVELOPMENT PLAN OVERLAY (DPO)

HERITAGE OVERLAY (HO)

PUBLIC ACQUISITION OVERLAY (PAO)

VEGETATION PROTECTION OVERLAY (VPO)

DCPO - Development Contributions Plan

DDO - Design and Development

DPO - Development Plan

HO - Heritage

PAO - Public Acquisition

VPO - Vegetation Protection

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

Areas of Aboriginal Cultural Heritage Sensitivity

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PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Further Planning Information

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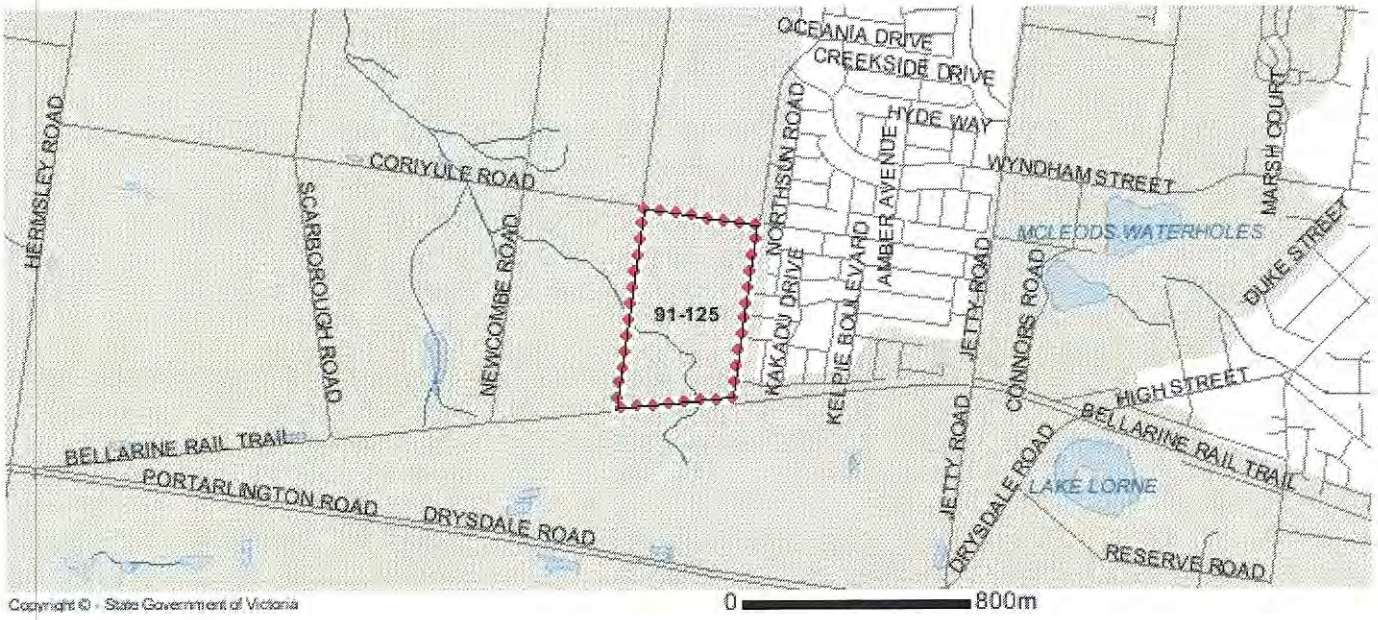
PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Designated Bushfire Prone Area

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.



Designated Bushfire Prone Area

Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011 and amended from time to time.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at http://mapshare.maps.vic.gov.au/vicplan or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website www.vba.vic.gov.au

Copies of the Building Act and Building Regulations are available from www.legislation.vic.gov.au

For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au

Environmental Site Assessments

Appendix 2: Lotsearch Report

Address: 32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Date: 19 Dec 2018 16:18:00

Reference: LS004828 EP

Table of Contents

Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a confidence is given under the field heading “LocConf” or “Location Confidence”.

Location Confidence	Description
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced with the confidence of the general/approximate area
Road Match	Georeferenced to the road or rail
Road Intersection	Georeferenced to the road intersection
Buffered Point	Feature is a buffered point
Network of Features	Georeferenced to a network of features

Dataset Listing

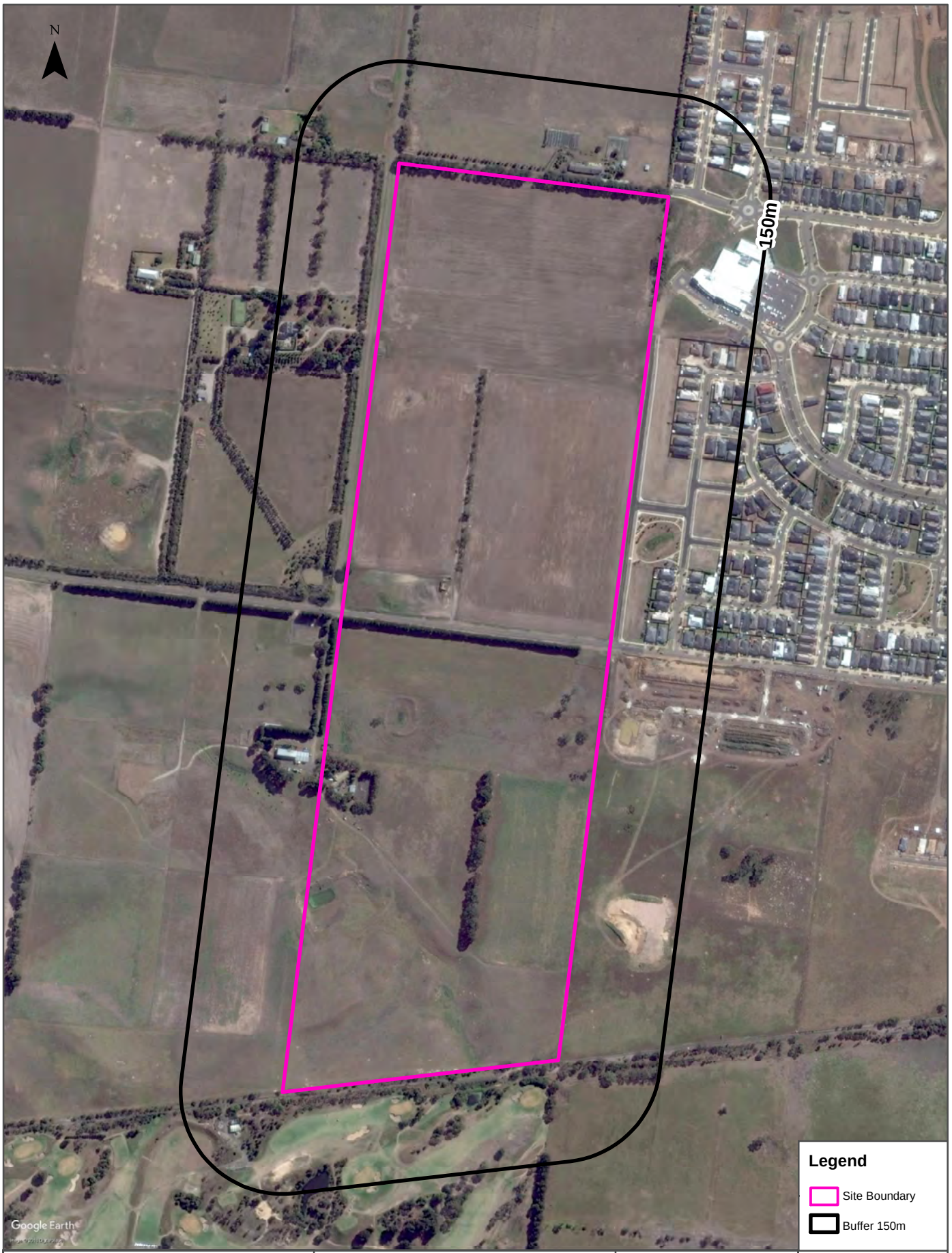
Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features in Buffer
Topographic and Cadastre data	State Government Victoria - Department of Environment, Land, Water & Planning	08/10/2018	08/10/2018	Quarterly	-	-	-	-
Current Priority Sites	Environment Protection Authority (Vic)	17/12/2018	31/10/2018	Monthly	1000	0	0	0
Former Priority Sites & other Pollution Notices	Environment Protection Authority (Vic)	19/11/2018	19/10/2018	Monthly	1000	0	0	0
EPA Environmental Audit Reports	Environment Protection Authority (Vic)	17/12/2018	17/12/2018	Monthly	1000	0	0	0
Groundwater Zones with Restricted Uses	Environment Protection Authority (Vic)	17/12/2018	17/12/2018	Monthly	1000	0	0	0
Licensed Activities	Environment Protection Authority (Vic)	18/12/2018	18/12/2018	Monthly	1000	0	0	0
Former Licensed Activities	Environment Protection Authority (Vic)	18/12/2018	18/12/2018	Monthly	1000	0	0	0
Works Approvals	Environment Protection Authority (Vic)	17/12/2018	17/12/2018	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	06/11/2018	07/03/2017	Quarterly	1000	0	0	0
Statewide Waste and Resource Recovery Infrastructure Plan Facilities	State Government Victoria - Department of Sustainability	27/11/2014	31/12/2012	None planned	1000	0	0	0
EPA Prescribed Industrial Waste	Environment Protection Authority (Vic)	23/10/2018	23/10/2018	Quarterly	1000	0	0	0
EPA Victorian Landfill Register	Environment Protection Authority (Vic)	04/12/2018	04/12/2018	Quarterly	1000	0	0	0
Former Gasworks	Various historical sources collated by Lotsearch	15/08/2017	15/08/2017	Not required	1000	0	0	0
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1960-62 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1960-62 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	0
Features of Interest	State Government Victoria - Department of Environment, Land, Water & Planning	12/10/2018	12/10/2018	Quarterly	1000	1	3	24
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Groundwater Salinity	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	29/08/2012	Unknown	0	1	-	-
Depth to Watertable	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	29/08/2012	Unknown	0	3	-	-
Surface Elevation	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	23/09/2013	Unknown	0	1	-	-
Basement Elevation	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	23/09/2013	Unknown	0	1	-	-

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features in Buffer
Groundwater Boreholes WMIS	State Government Victoria - Department of Environment, Land, Water & Planning	30/10/2018	01/10/2018	Quarterly	2000	1	1	12
Groundwater Boreholes Earth Resources Database	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	27/07/2018	17/02/2010	As required	2000	0	0	2
Groundwater Boreholes Fed Uni	Federation University Australia	21/12/2017	07/01/2014	As required	2000	1	1	12
Historical Mining Activity - Shafts	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	18/10/2018	20/07/2018	As required	1000	0	0	0
Geological Units 1:50,000	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	1000	2	-	3
Geological Structures 1:50,000	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	1000	0	-	0
Dykes and Marker Beds 50k	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	1000	0	-	0
Shear zones 250k	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	1000	0	-	0
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	2
Victorian Soil Type Mapping	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	24/08/2017	21/03/2016	Unknown	1000	2	2	4
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	3
Coastal Acid Sulfate Soils	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	28/03/2017	30/03/2011	None planned	1000	0	0	0
Planning Scheme Zones	State Government Victoria - Department of Environment, Land, Water & Planning	04/12/2018	28/11/2018	Monthly	1000	1	6	17
Planning Scheme Overlay	State Government Victoria - Department of Environment, Land, Water & Planning	04/12/2018	28/11/2018	Monthly	1000	0	6	12
Victorian Heritage Register	State Government Victoria - Department of Environment, Land, Water & Planning	12/10/2018	12/10/2018	Quarterly	1000	0	1	1
Cultural Heritage Sensitivity	State Government Victoria - Department of Planning and Community Development	12/10/2018	12/10/2018	Quarterly	1000	2	6	24
Bushfire Prone Area	State Government Victoria - Department of Transport, Planning and Local Infrastructure	12/10/2018	16/05/2018	Quarterly	1000	1	1	1
Fire History	State Government Victoria - Department of Environment, Land, Water & Planning	12/10/2018	28/06/2018	Quarterly	1000	0	0	0
Flood - 1 in 100 Year Modelled Flood Extent	State Government Victoria - Department of Environment, Land, Water & Planning	12/10/2018	18/11/2014	Quarterly	1000	0	0	1
Victorian Coastal Inundation Sea Level Rise	Department of Environment, Land, Water & Planning	10/04/2018	24/10/2017	Unknown	1000	0	0	8
Native Vegetation (Modelled 2005 Ecological Vegetation Classes)	State Government Victoria - Department of Environment, Land, Water & Planning	13/01/2015	31/12/2005	None planned	1000	1	1	2
Ramsar Wetlands	State Government Victoria - Department of Environment, Land, Water & Planning	28/03/2017	24/06/2013	None planned	1000	0	0	0
Groundwater Dependent Ecosystems Atlas	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	1	1	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	2	3	5

Aerial Imagery 2017

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Scale:
0 100 200 400
Meters

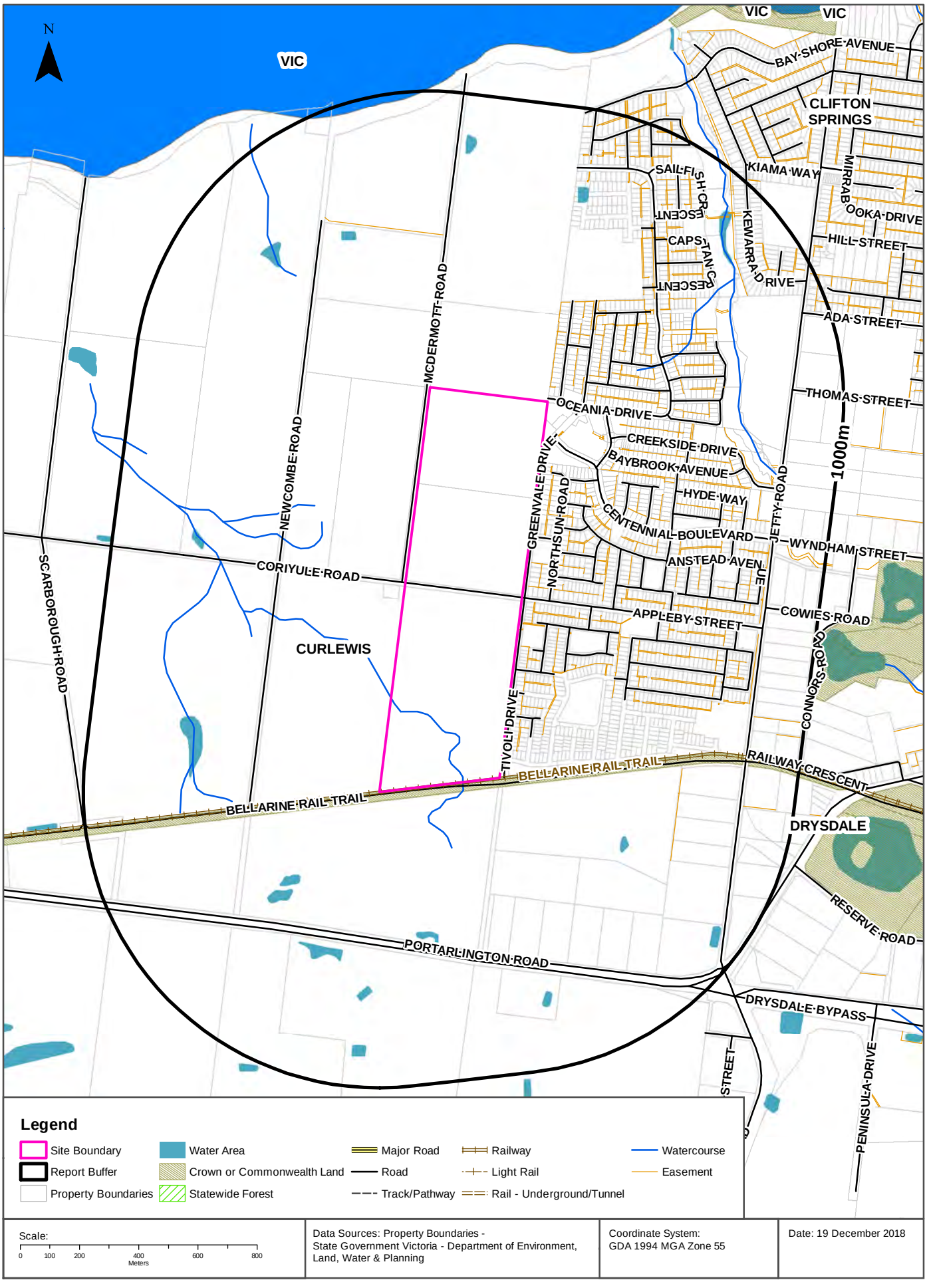
Data Source Aerial Imagery: © 2018 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 55

Date: 19 December 2018

Topographic Data

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Legend

Site Boundary	Water Area	Major Road	Railway	Watercourse
Report Buffer	Crown or Commonwealth Land	Road	Light Rail	Easement
Property Boundaries	Statewide Forest	Track/Pathway	Rail - Underground/Tunnel	

Scale: 0 100 200 400 600 800 Meters

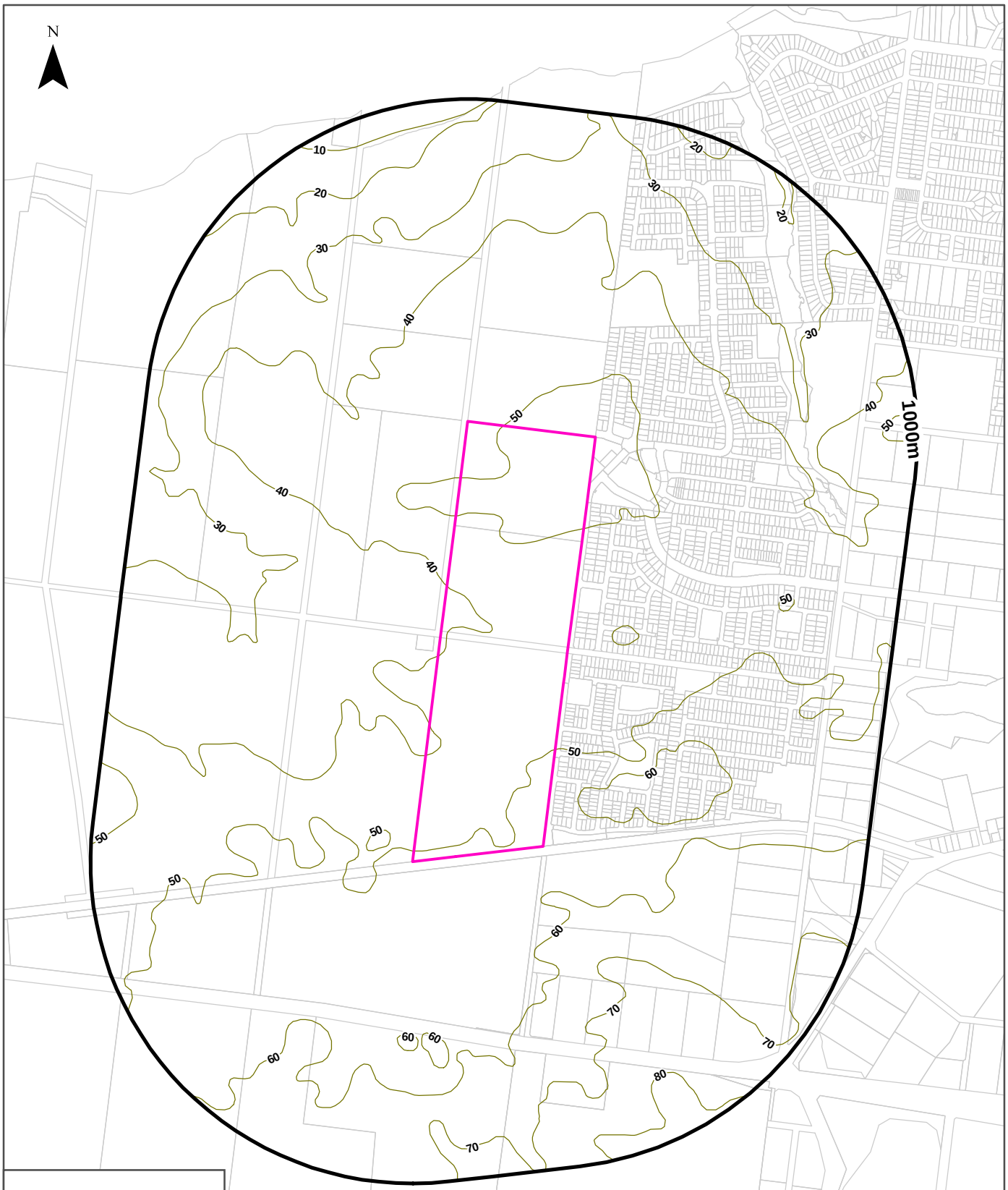
Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning

Coordinate System: GDA 1994 MGA Zone 55

Date: 19 December 2018

Elevation Contours (m AHD) 10m Interval at 1:25,000

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Accuracy & Currency: This 10m interval contour data was originally captured in 1974 at 1:25,000 scale. The accuracy of this data means that it must not be used for any design or engineering works, but only as a general guide to topography.The planimetric accuracy is that not more than 10% of well-defined points will be in error more than 16m, with a worse case scenario of +/- 30m. For vertical positional accuracy of points determined from contours there is an expectation that the elevation accuracy (standard deviation) will be half the value of the contour interval.

Scale: 0 100 200 400 600 800 Meters

Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning

Coordinate System: GDA 1994 MGA Zone 55

Date: 19 December 2018

EPA Records

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Current EPA Priority Sites Register

Sites on the current EPA priority sites register that exist within the dataset buffer:

Notice No	Address	Suburb	Issue	Loc Conf	Dist (m)	Direction
N/A	No records in buffer					

Priority Sites Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Former EPA Priority Sites & Other Pollution Notices

Sites within the dataset buffer that have been issued a Pollution Notice:
Note. Due to pollution notices being revoked and removed from published lists this is not an exhaustive list of all past pollution notices.

Notice No	Notice Type	Company	Address	Suburb	Status	Issue	Date Issued	Loc Conf	Dist	Dir
N/A	No records in buffer									

Pollution Notice Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

EPA Environmental Audits

EPA environmental audit records that exist within the dataset buffer:
Note. Please click on CARMS No. to activate a hyperlink to online documentation. If link does not work, documentation may still be accessible via the EPA Interaction Portal.

CARMS No	Transaction No	Site	Address	Suburb	Date Complete	Loc Conf	Distance	Direction
N/A	No records in buffer							

Environmental Audit Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

EPA Groundwater Zones with Restricted Uses

EPA GQRUZ records that exist within the dataset buffer:
Note. Please click on CARMS No. to activate a hyperlink to online documentation.

CARMS No	EPA Id	Site History	Site Address	Restricted Uses	Loc Conf	Distance	Direction
N/A	No records in buffer						

Environmental GQRUZ Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

EPA Licensed Activities

EPA licensed activities that exist within the dataset buffer:

Trans No	Licence No	Licence Type	Organisation	Premise Ref	Premise Address 1	Premise Address 2	Activities	Loc Conf	Dist (m)	Direction
N/A	No records in buffer									

Licensed Activity Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Former EPA Licensed Activities

Former EPA licensed activities that exist within the dataset buffer:

Licence No	Organisation	Premise Address	Suburb	Activities	Loc Conf	Dist (m)	Direction
N/A	No records in buffer						

Former Licensed Activity Data Custodian: State Government Victoria - Environmental Protection Authority (EPA)

EPA Works Approvals

EPA works approvals that exist within the dataset buffer:

Transaction No	Status	Approval No	Organisation	Premise Address	Suburb	Scheduled Categories	Loc Conf	Dist (m)	Direction
N/A	No records in buffer								

Works Approvals Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Waste Management Facilities

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist (m)	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Australian Government Geoscience Australia

Statewide Waste and Resource Recovery Infrastructure Plan Facilities

Statewide Waste and Resource Recovery Infrastructure Plan Facilities within the dataset buffer:

Map Id	Owner	Site Name	Address	Suburb	Category	Sub Category	Loc Conf	Distance	Direction
N/A	No records in buffer								

SWRRIPF Data Source: State Government Victoria - Department of Sustainability

EPA Prescribed Industrial Waste

EPA Prescribed Industrial Waste treaters, disposers and permitted transporters within the dataset buffer:

Map Id	Company Name	Address	Suburb	Treatment /Disposal	Transport	Accredited Agent	EPA List Status	Loc Conf	Dist' (m)	Direct
N/A	No records in buffer									

Prescribed Industrial Waste Data Source: State Government Victoria - Environment Protection Authority (EPA)

EPA Victorian Landfill Register

EPA Victorian Landfill Register sites within the dataset buffer:

Landfill Register No.	Site	Address	Operating Status	Est. Year Of Closure	Waste type	Loc Conf	Dist' (m)	Direction
No records in buffer								

EPA Victorian Landfill Register Data Source: State Government Victoria - Environment Protection Authority (EPA)

Former Gasworks

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Former Gasworks

Former Gasworks identified from various historical sources within the dataset buffer:
Note - As this is a dataset collated from various historical sources, it is not an exhaustive list of all former Gasworks

Map Id	Site Name	Date Opened	Year Closed	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Collated from various historical sources

Historical Business Directories

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

1970 Business Directory Records
Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

1970 Business Directory Records
Road or Area Matches

Records from the 1970 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Historical Business Directories

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

1960-62 Business Directory Records
Premise or Road Intersection Matches

Records from the 1960-62 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Directory	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer					

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1960-62 Business Directory Records
Road or Area Matches

Records from the 1960-62 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Directory	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

1950 Business Directory Records
Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

1950 Business Directory Records
Road or Area Matches

Records from the 1950 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Historical Business Directories

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer					

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

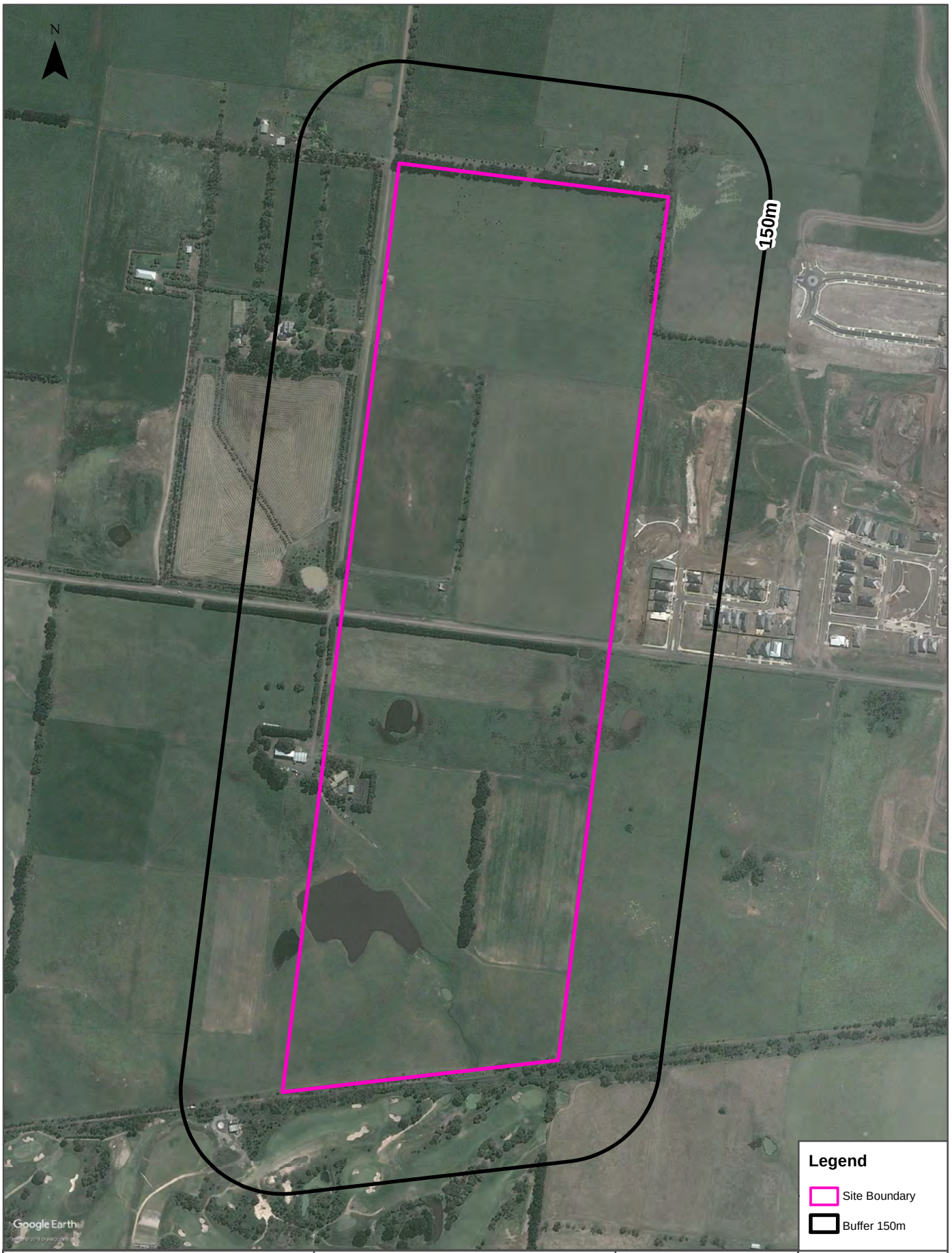
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Aerial Imagery 2012

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



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0 100 200 400
Meters

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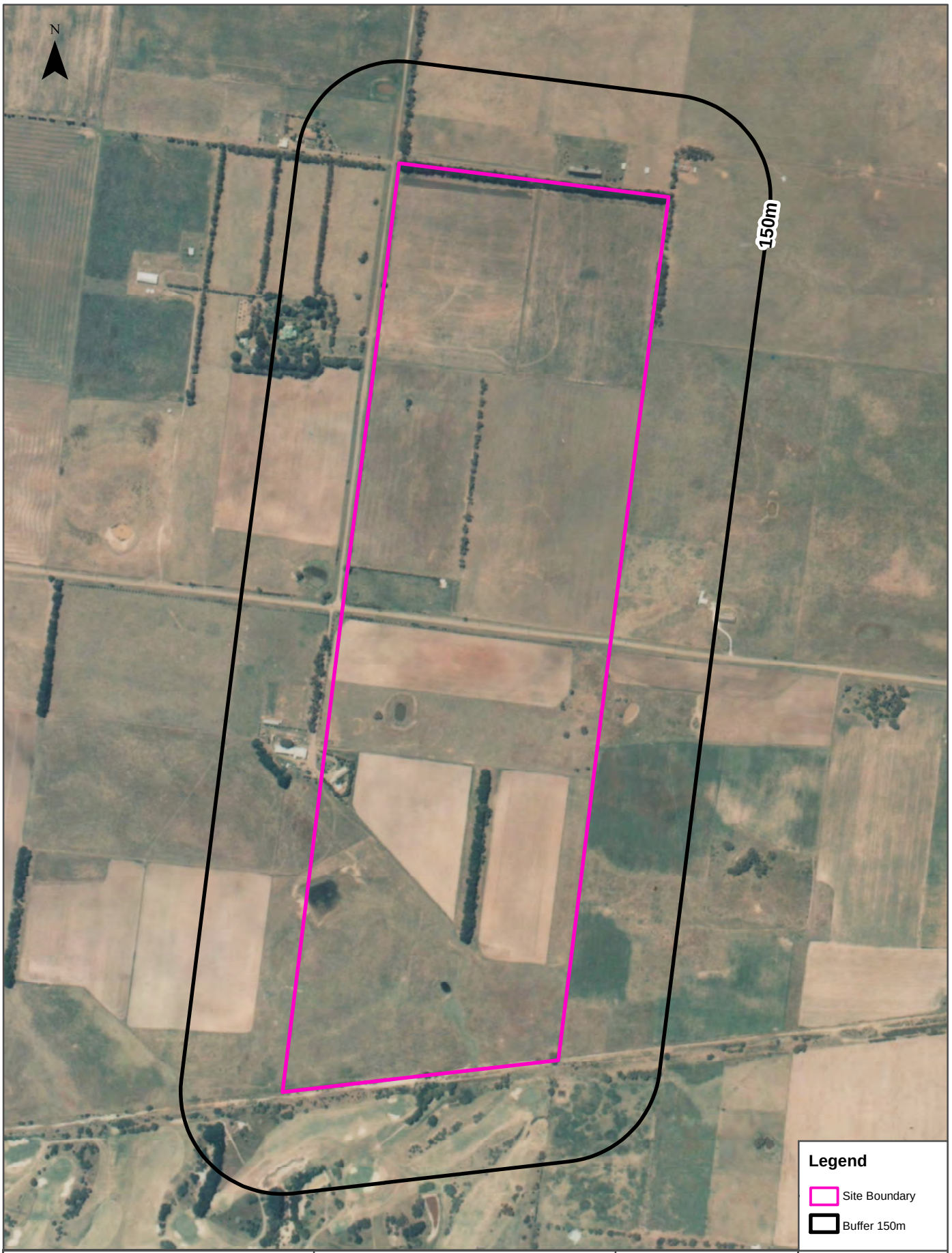
Coordinate System:
GDA 1994 MGA Zone 55

Date: 19 December 2018

Aerial Imagery 1990

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Scale:
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Meters

Data Source Aerial Imagery:
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(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55

Date: 09 January 2019

Aerial Imagery 1984

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 20 December 2018
0 100 200 400 Meters	© Department of Environment, Land, Water and Planning (Vicmap Topographic Mapping Program)	GDA 1994 MGA Zone 55	

Aerial Imagery 1984

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Aerial Imagery 1978

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Data Source Aerial Imagery:
© Department of Environment, Land, Water and Planning
(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55

Date: 20 December 2018

Aerial Imagery 1970

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Data Source Aerial Imagery:
© Department of Environment, Land, Water and Planning
(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55

Date: 20 December 2018

Aerial Imagery 1964

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Data Source Aerial Imagery:
© Department of Environment, Land, Water and Planning
(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55

Date: 20 December 2018

Aerial Imagery 1962

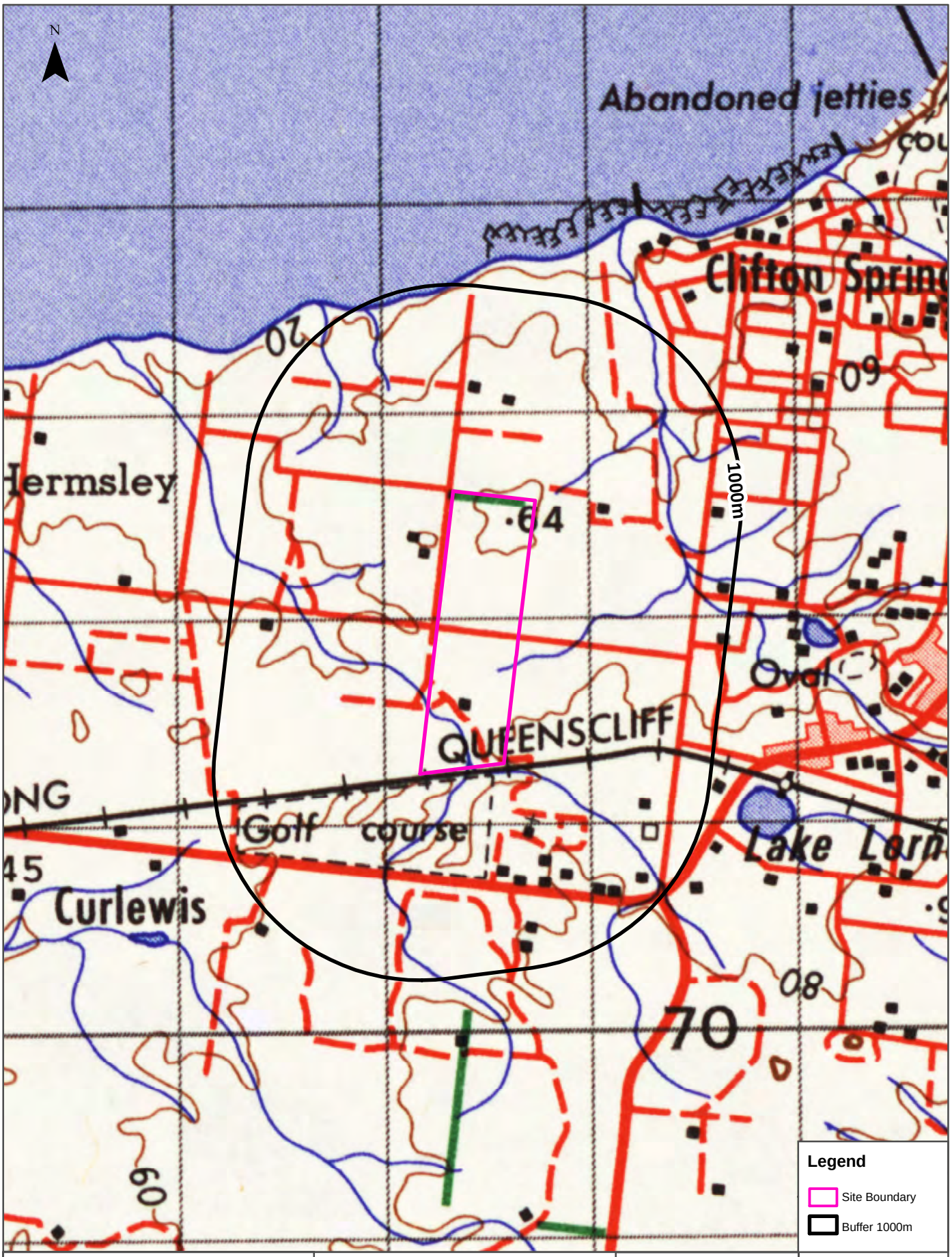
32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Aerial Imagery 1950

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Historical Map 1970

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Scale: 0 500 1,000 Meters

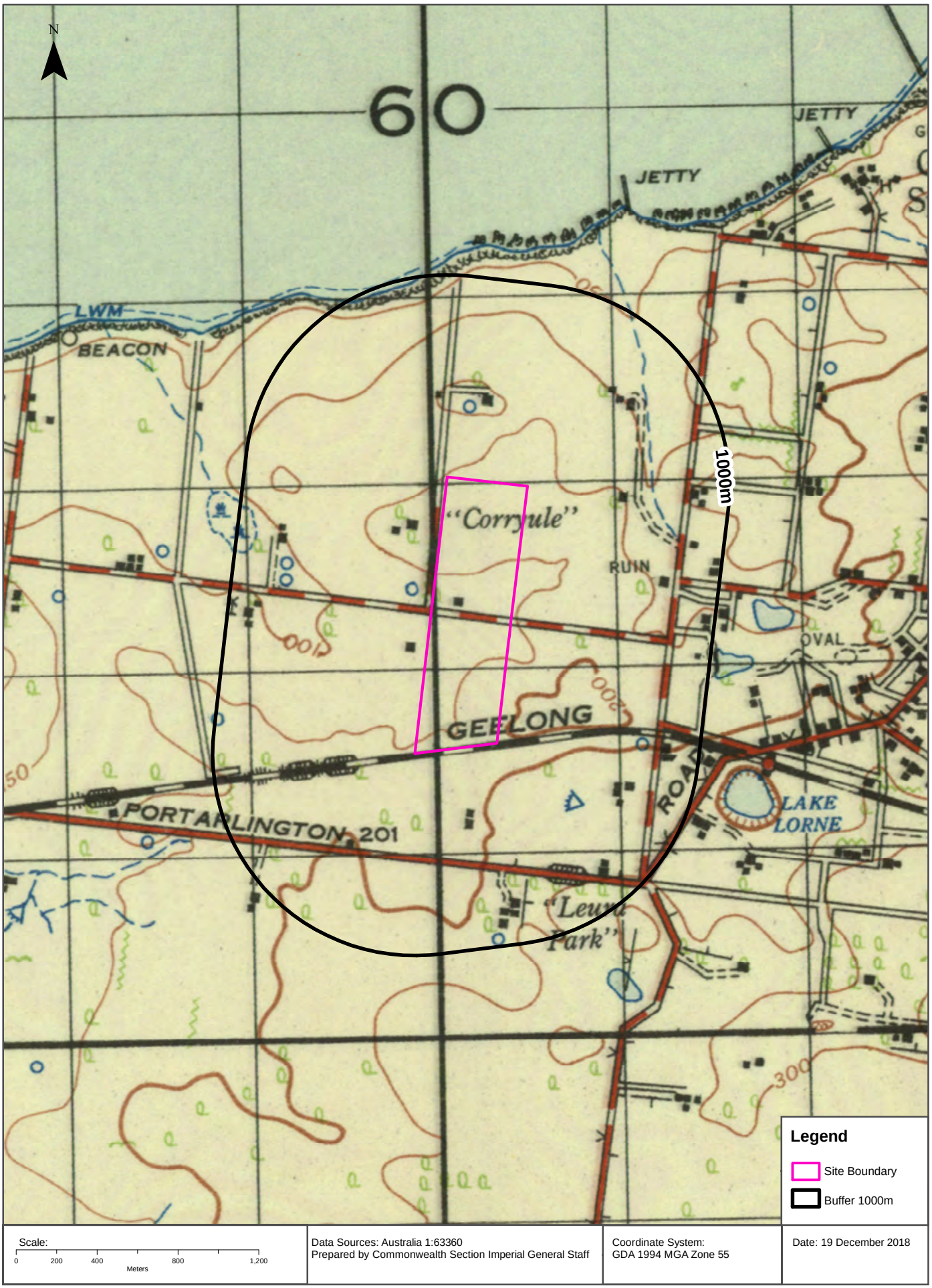
Data Sources: NATMAP 1:100,000 Topographic Maps
Geoscience Australia

Coordinate System:
GDA 1994 MGA Zone 55

Date: 19 December 2018

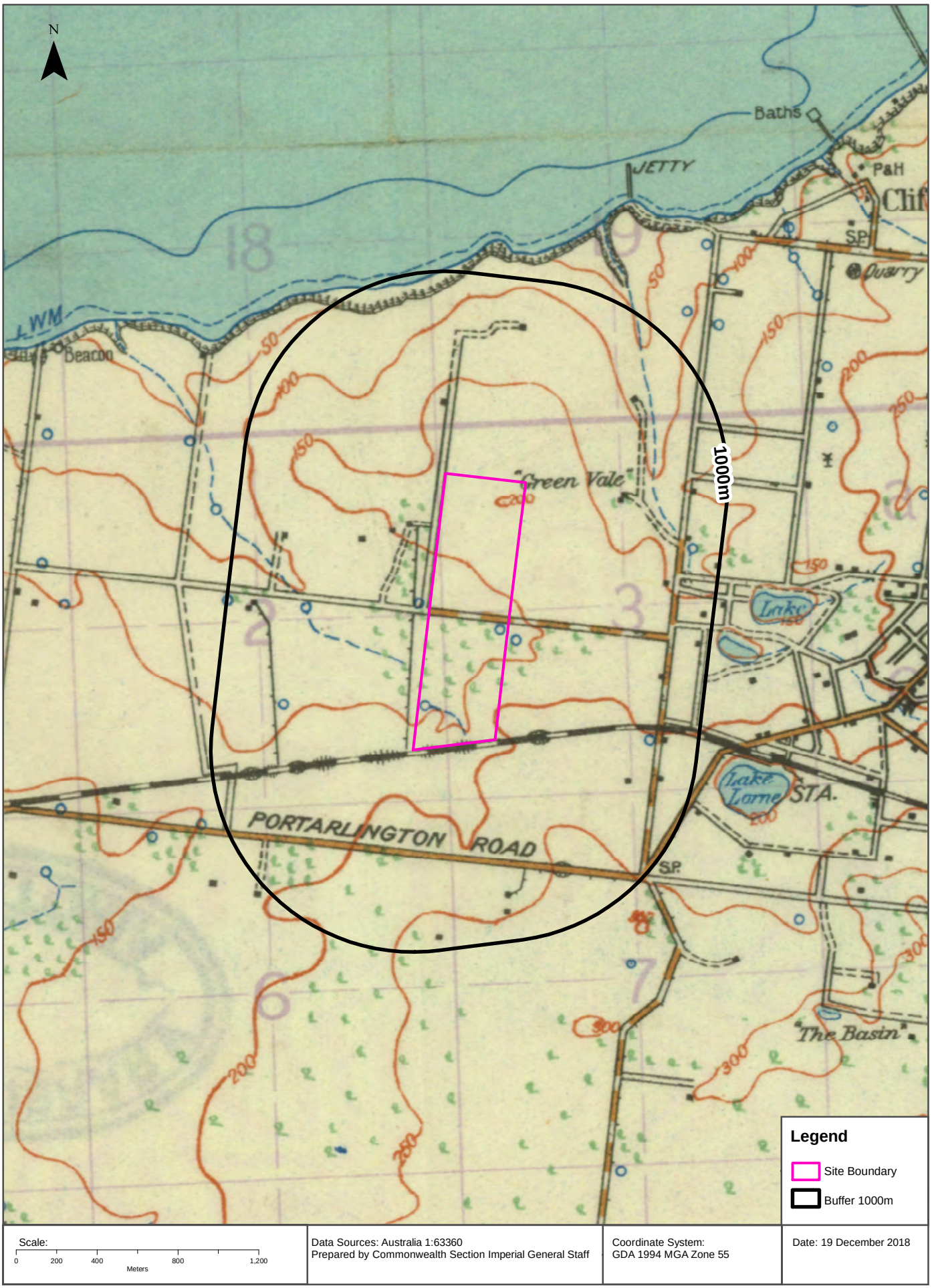
Historical Map c.1955

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



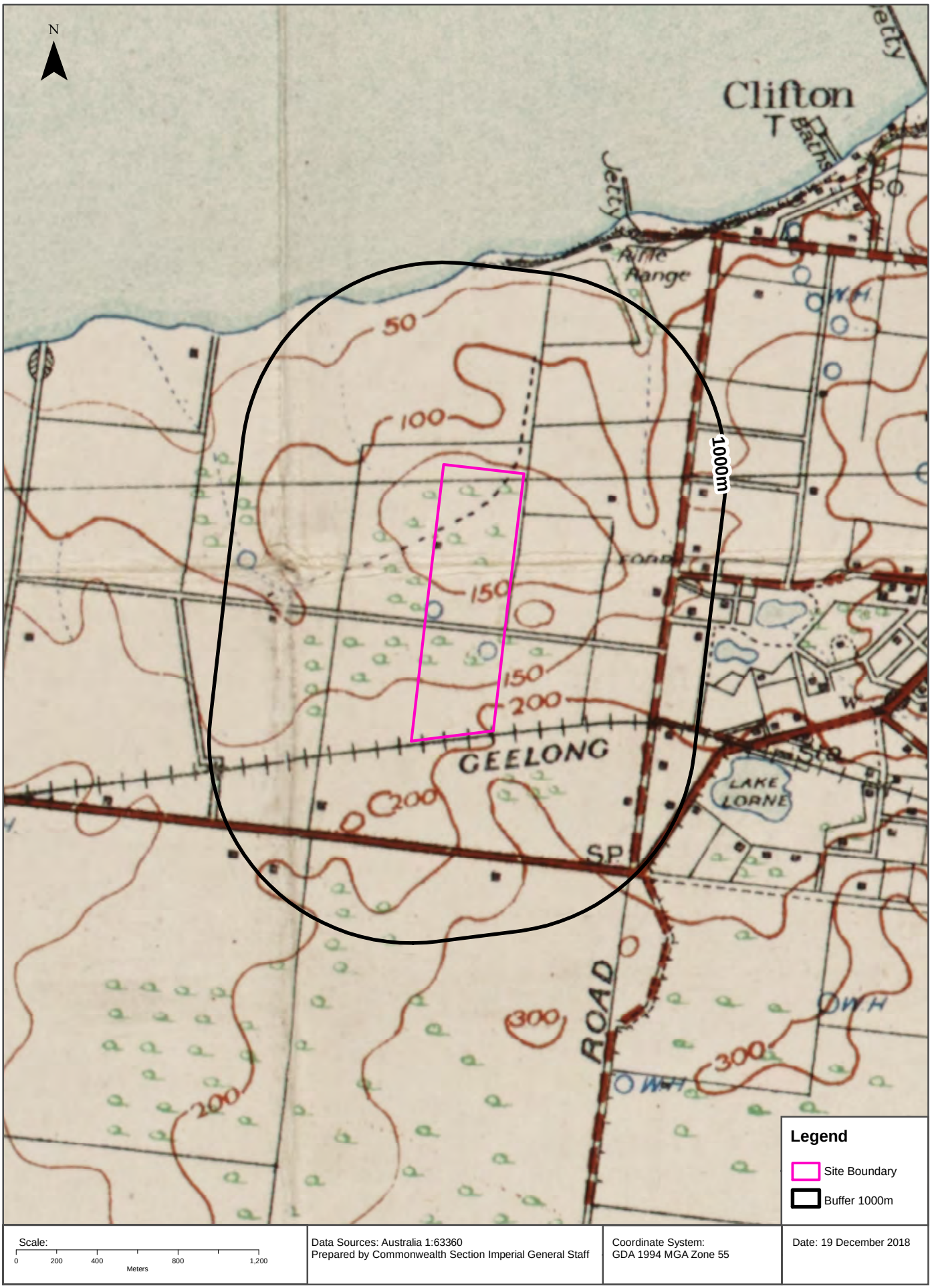
Historical Map c.1929

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



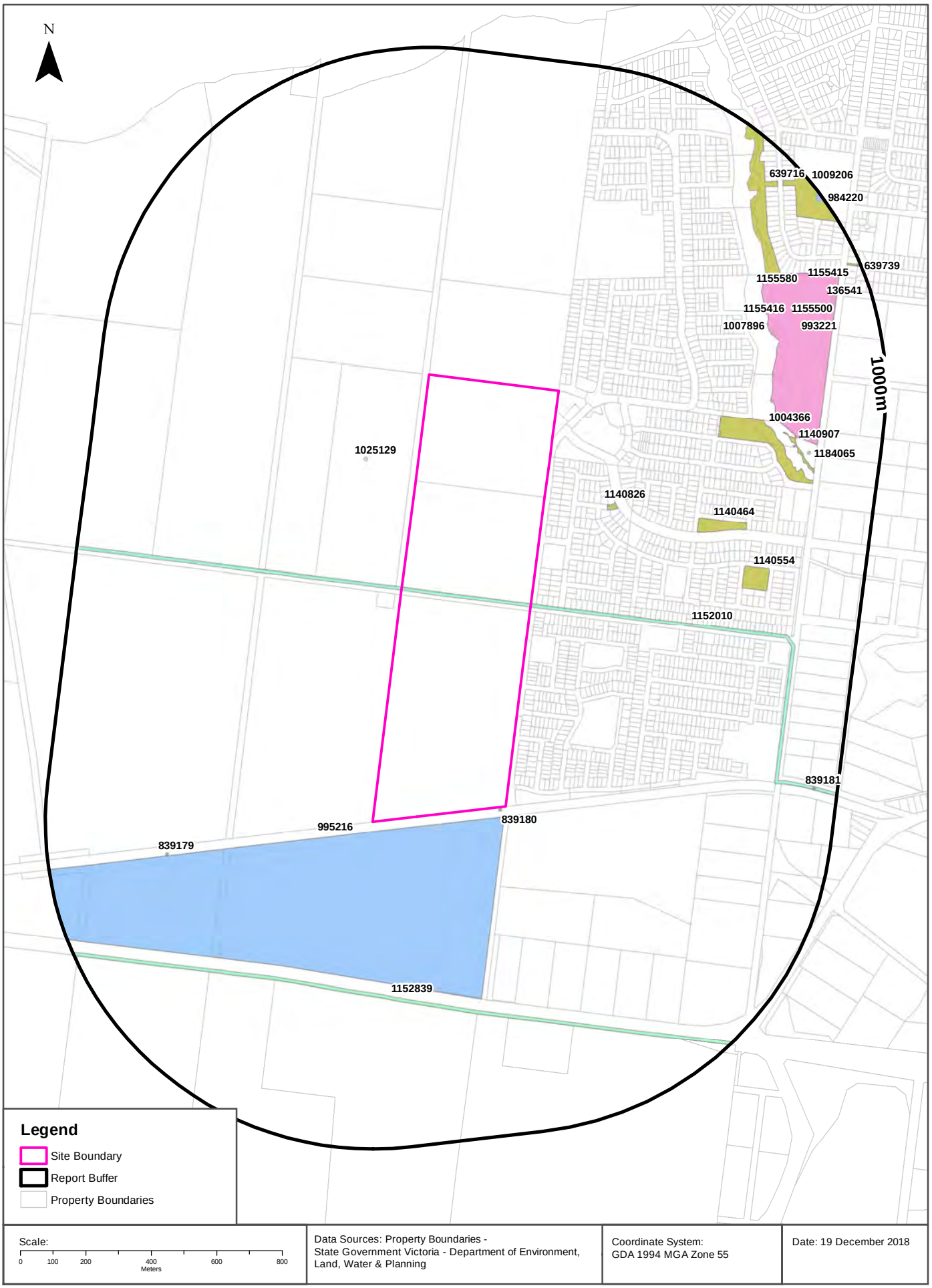
Historical Map c.1914

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Features of Interest

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Features of Interest

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

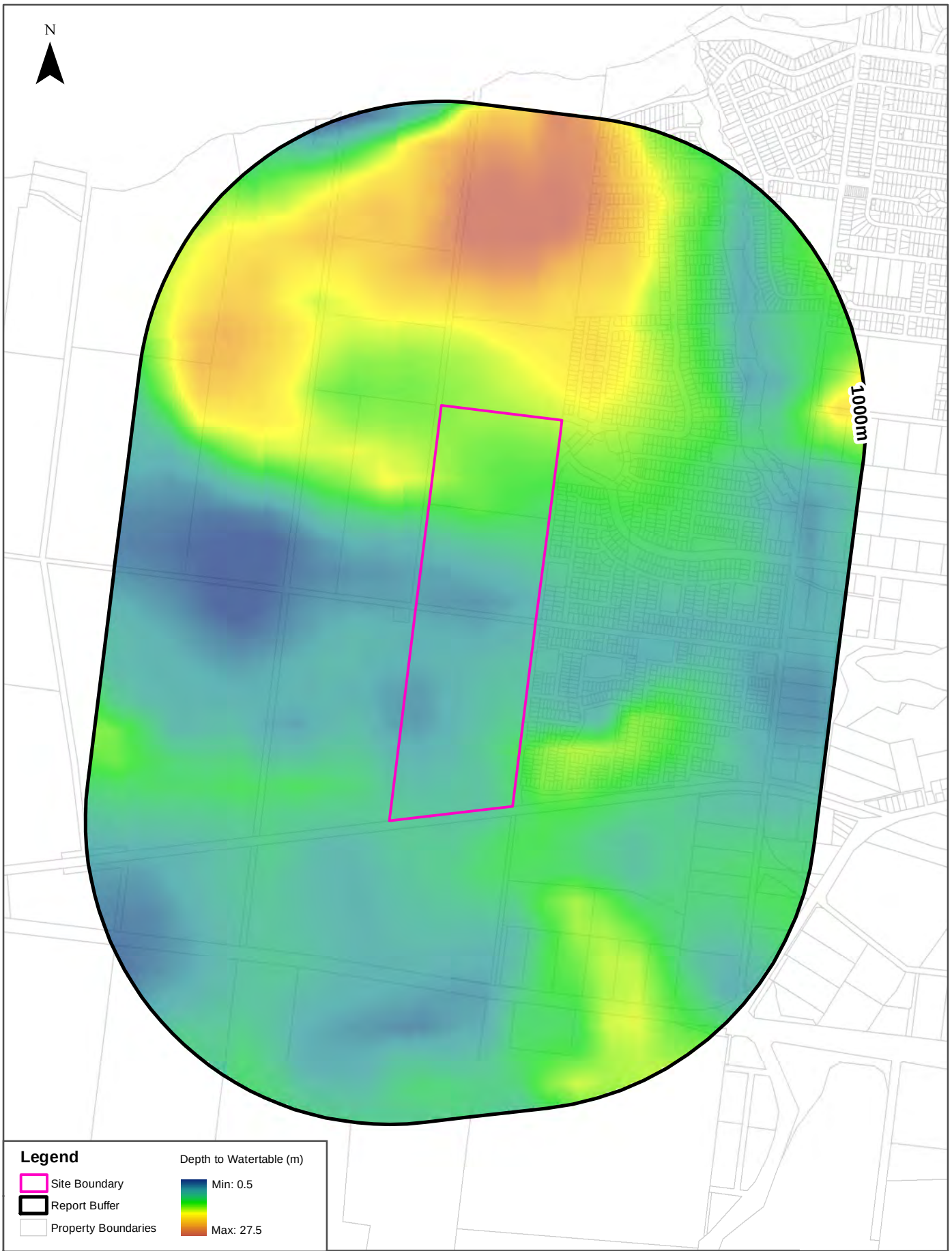
Features of Interest

Features of Interest within the dataset buffer:

Feature Id	Feature Type	Feature Sub Type	Name	Distance	Direction
1152010	power line	power sub transmission		0m	Onsite
839180	sign	emergency marker	BRT116	3m	South
995216	sport facility	golf course	Curlewis Golf Club	30m	South West
1025129	landmark	tourist attraction	Coriyule Homestead	154m	North West
1140826	reserve	park		194m	North East
1140464	reserve	park		474m	East
1004366	reserve	park	Percy Cherry Park	501m	North East
1152839	power line	power sub transmission		517m	West
839179	sign	emergency marker	BRT115	631m	South West
1140554	reserve	park		632m	East
1007896	education centre	education complex		647m	North East
1140907	reserve	park		696m	North East
639716	reserve	park		725m	North East
1155416	sport facility	sports ground		748m	North East
1184065	care facility	child care	Eclipse Early Education Curlewis	778m	North East
1155580	recreational resource	playground		789m	North East
993221	care facility	child care	Clifton Springs Primary School Outside School Hours Care	796m	North East
1155415	sport facility	sports ground		802m	North East
1155500	recreational resource	playground		862m	North East
136541	education centre	primary school	Clifton Springs Primary School	878m	North East
1009206	reserve	park	Jetty Road Reserve	901m	North East
839181	sign	emergency marker	BRT117	923m	South East
639739	reserve	park		962m	North East
984220	sport facility	tennis court		979m	North East

Depth to Watertable

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Data Sources:- Property Boundaries: State Government Victoria - Department of Environment, Land, Water & Planning; Depth to Watertable: The State of Victoria, Department of Environment, Land, Water & Planning. Resampled (bilinear) to 10m.

Coordinate System: GDA 1994 MGA Zone 55

Date: 19 December 2018

Hydrogeology & Groundwater

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	0m	Onsite

Groundwater Salinity

On-site Groundwater Salinity:

Groundwater Salinity	Percent Of Site Area
3,500 - 7,000 mg/l	100

Depth to Watertable

On-site Depth to Watertable:

Depth to Watertable	Percent Of Site Area
5 to 10 metres	60
10 to 20 metres	31
Less than 5 metres	9

Surface Elevation

Approximate on-site Surface Elevation:

Surface Elevation
38 AHDm to 55 AHDm

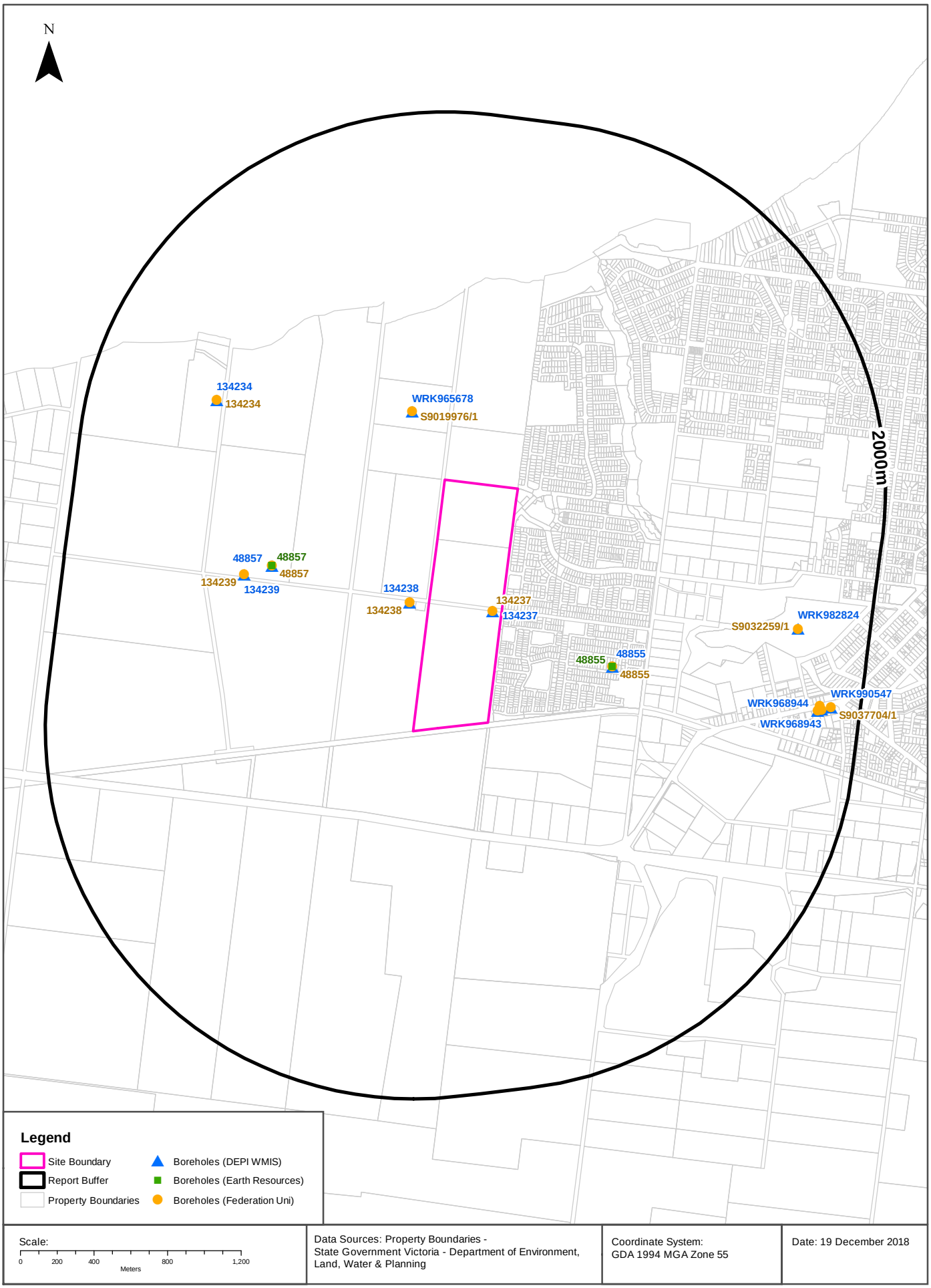
Basement Elevation

Approximate on-site Basement Elevation:

Basement Elevation - Basement Rocks comprise Lower Palaeozoic basement rocks that form the highlands and the crystalline basement; and Mesozoic rocks of the Otway and Gippsland basins both outcropping and subsurface
-46 AHDm to -10 AHDm

Groundwater Boreholes

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Groundwater Boreholes

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Boreholes (DEPI WMIS)

Boreholes from the Department of Environment and Primary Industries' Water Measurement Information System, within the dataset buffer:

Bore Id	Use Type	Drillers Log	Construction	Latest Water Levels	Geology	Completed Date	Dist (m)	Dir
134237	Groundwater Investigation	0.00m-1.00m SAND SILTY SAND 1.00m-4.00m CLAYEY SAND 4.00m-6.00m SILTY CLAY 6.00m-8.00m CLAYEY SAND 8.00m-20.80m CLAYEY SAND	-0.50m-17.50m INNER LINING - CASING = Pvc 17.50m-19.00m INNER LINING - SCREEN = Pvc 19.00m-20.80m INNER LINING - CASING = Pvc 0.00m-9.00m OUTER LINING - GRAVEL = Cement 9.00m-13.00m OUTER LINING - GRAVEL = Bentonite 13.00m-20.80m OUTER LINING - GRAVEL = Gravel		17.50m-19.00m Sand	1998-03-13	0	Onsite
134238	Groundwater Investigation	0.00m-1.50m SAND 1.50m-4.00m CLAYEY SAND 4.00m-6.00m BROWN CLAYEY SAND 6.00m-15.80m CLAYEY SAND & GRAVEL	-0.50m-12.50m INNER LINING - CASING = Pvc 12.50m-14.20m INNER LINING - SCREEN = Pvc 14.20m-15.80m INNER LINING - CASING = Pvc 0.00m-2.00m OUTER LINING - GRAVEL = Cement 2.00m-5.00m OUTER LINING - GRAVEL = Bentonite 5.00m-15.80m OUTER LINING - GRAVEL = Gravel			1998-03-13	103	West
WRK965678	Domestic & Stock	0.00m-2.00m BROWN CLAY 2.00m-12.00m YELLOW SANDSTONE 12.00m-15.50m BROWN SANDSTONE 15.50m-20.00m YELLOW SANDSTONE 20.00m-22.00m FINE BROWN SAND 22.00m-27.00m COARSE GRAVEL	-0.50m-22.00m INNER LINING - CASING = Pvc 22.00m-27.00m INNER LINING - SCREEN = Pvc 0.00m-0.50m OUTER LINING - GRAVEL = Cement			2004-07-27	408	North
48855	Domestic, Stock	0.00m-2.00m BROWN CLAY 2.00m-3.00m GREY CLAY 3.00m-5.00m YELLOW CLAY 5.00m-7.00m PIPE CLAY 7.00m-12.00m YELLOW CLAY 12.00m-18.00m YELLOW SAND	0.00m-18.00m INNER LINING - CASING = Pvc 0.00m-18.00m INNER LINING - SCREEN = Pvc		0.00m-18.00m Clay	1982-12-30	633	South East
48857	Domestic, Stock	0.00m-1.00m TOP SOIL 1.00m-3.00m BROWN CLAY 3.00m-5.00m YELLOW SAND 5.00m-9.00m GREY SAND 9.00m-11.00m OFF WHITE SAND 11.00m-13.00m SAND CLAY 13.00m-18.30m SOFT SANDSTONE	0.00m-12.00m INNER LINING - CASING = Pvc 12.00m-18.00m INNER LINING - SCREEN = Pvc		12.00m-18.00m Sandstone	1983-01-06	873	West
134239	Groundwater Investigation	0.00m-1.00m SAND SANDY SILT 1.00m-20.00m CLAYEY SAND	0.00m-17.00m INNER LINING - CASING = Pvc 17.00m-18.50m INNER LINING - SCREEN = Pvc 18.50m-20.00m INNER LINING - CASING = Pvc 0.00m-7.50m OUTER LINING - GRAVEL = Cement 7.50m-14.50m OUTER LINING - GRAVEL = Bentonite 14.50m-20.00m OUTER LINING - GRAVEL = Gravel		17.00m-18.50m Sand	1998-03-16	1015	West
134234	Groundwater Investigation	0.00m-1.00m SAND SILTY SAND 1.00m-4.50m CLAYEY SAND MOTTLED 4.50m-12.80m CLAYEY SAND LIGHT BROWN	-0.50m-9.50m INNER LINING - CASING = Pvc 9.50m-11.00m INNER LINING - SCREEN = Pvc 11.00m-12.80m INNER LINING - CASING = Pvc 0.00m-6.50m OUTER LINING - GRAVEL = Cement 6.50m-7.00m OUTER LINING - GRAVEL = Bentonite 7.00m-12.80m OUTER LINING - GRAVEL = Gravel		9.50m-11.00m Sand	1998-03-16	1312	North West
WRK982824							1607	East

Bore Id	Use Type	Drillers Log	Construction	Latest Water Levels	Geology	Completed Date	Dist (m)	Dir
WRK968944	Domestic & Stock		0.00m-18.70m INNER LINING - CASING = Pvc 18.70m-25.00m INNER LINING - SCREEN = Pvc 0.00m-0.50m OUTER LINING - GRAVEL = Cement 0.50m-15.00m OUTER LINING - GRAVEL = Cement 15.00m-16.00m OUTER LINING - GRAVEL = Bentonite 16.00m-25.00m OUTER LINING - GRAVEL = Gravel			2005-03-10	1771	East
WRK968942	Domestic & Stock		0.00m-15.00m INNER LINING - CASING = Pvc 15.00m-22.50m INNER LINING - SCREEN = Pvc 0.00m-0.50m OUTER LINING - GRAVEL = Cement 0.50m-10.20m OUTER LINING - GRAVEL = Cement 10.20m-11.00m OUTER LINING - GRAVEL = Bentonite 11.00m-22.50m OUTER LINING - GRAVEL = Gravel			2005-03-10	1778	East
WRK968943	Domestic & Stock		0.00m-17.90m INNER LINING - CASING = Pvc 17.90m-23.90m INNER LINING - SCREEN = Pvc 0.00m-0.50m OUTER LINING - GRAVEL = Cement 0.50m-10.00m OUTER LINING - GRAVEL = Cement 10.00m-11.00m OUTER LINING - GRAVEL = Bentonite 11.00m-23.90m OUTER LINING - GRAVEL = Gravel			2005-03-10	1790	East
WRK990547	Groundwater Investigation					2009-04-22	1840	East

Groundwater Boreholes

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Boreholes (Earth Resources Database)

Boreholes from the Earth Resources dataset, within the dataset buffer:

Bore Id	Bore Type	Company	Usage	Method	Status	Drill Date	Depth	Elevation	Accuracy (m)	Dist (m)	Direct
48855		Private Individual/Corporation	Domestic & Stock water supply	Percussion (cable)		30/12/1982	18.00		100	632	South East
48857		Private Individual/Corporation	Domestic & Stock water supply	Percussion (cable)		06/01/1983	18.30		100	873	West

Boreholes (Federation University)

Boreholes from the Federation University Australia dataset, within the dataset buffer:

Bore Id	Authority	Type	Uses	Initial TD	Log	Dist (m)	Direct
134237		Groundwater	Investigation		D: 0.000m-1.000m Sand Silty Sand D: 1.000m-4.000m Clayey Sand D: 4.000m-6.000m Silty Clay D: 6.000m-8.000m Clayey Sand D: 8.000m-20.800m Clayey Sand	0	Onsite
134238		Groundwater	Investigation		D: 0.000m-1.500m Sand D: 1.500m-4.000m Clayey Sand D: 4.000m-6.000m Brown Clayey Sand D: 6.000m-15.800m Clayey Sand & Gravel	103	West
S9019976/1		Groundwater	Domestic (DM) Stock (ST)		D: 0.000m-2.000m Brown Clay D: 2.000m-12.000m Yellow Sandstone D: 12.000m-15.500m Brown Sandstone D: 15.500m-20.000m Yellow Sandstone D: 20.000m-22.000m Fine Brown Sand D: 22.000m-27.000m Coarse Gravel	408	North
48855	Private Landholders Bore	Groundwater	Domestic Stock	2099.00	D: 0.000m-2.000m Brown Clay D: 2.000m-3.000m Grey Clay D: 3.000m-5.000m Yellow Clay D: 5.000m-7.000m Pipe Clay D: 7.000m-12.000m Yellow Clay D: 12.000m-18.000m Yellow Sand	633	South East
48857	Private Landholders Bore	Groundwater	Domestic Stock	438.40	D: 0.000m-1.000m Top Soil D: 1.000m-3.000m Brown Clay D: 3.000m-5.000m Yellow Sand D: 5.000m-9.000m Grey Sand D: 9.000m-11.000m Off White Sand D: 11.000m-13.000m Sand Clay D: 13.000m-18.300m Soft Sandstone	873	West
134239		Groundwater	Investigation		D: 0.000m-1.000m Sand Sandy Silt D: 1.000m-20.000m Clayey Sand	1015	West
134234		Groundwater	Investigation		D: 0.000m-1.000m Sand Silty Sand D: 1.000m-4.500m Clayey Sand Mottled D: 4.500m-12.800m Clayey Sand Light Brown	1312	North West
S9032259/1	Private Landholders Bore	Groundwater				1607	East
S9022023/3		Groundwater	Domestic and Stock			1771	East

Bore Id	Authority	Type	Uses	Initial TD	Log	Dist (m)	Direct
S9022023/1		Groundwater	Domestic and Stock			1778	East
S9022023/2		Groundwater	Domestic and Stock			1790	East
S9037704/1		Groundwater	Groundwater Investigation			1840	East

Historical Mining Activity - Shafts

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Historical Mining Activity - Shafts

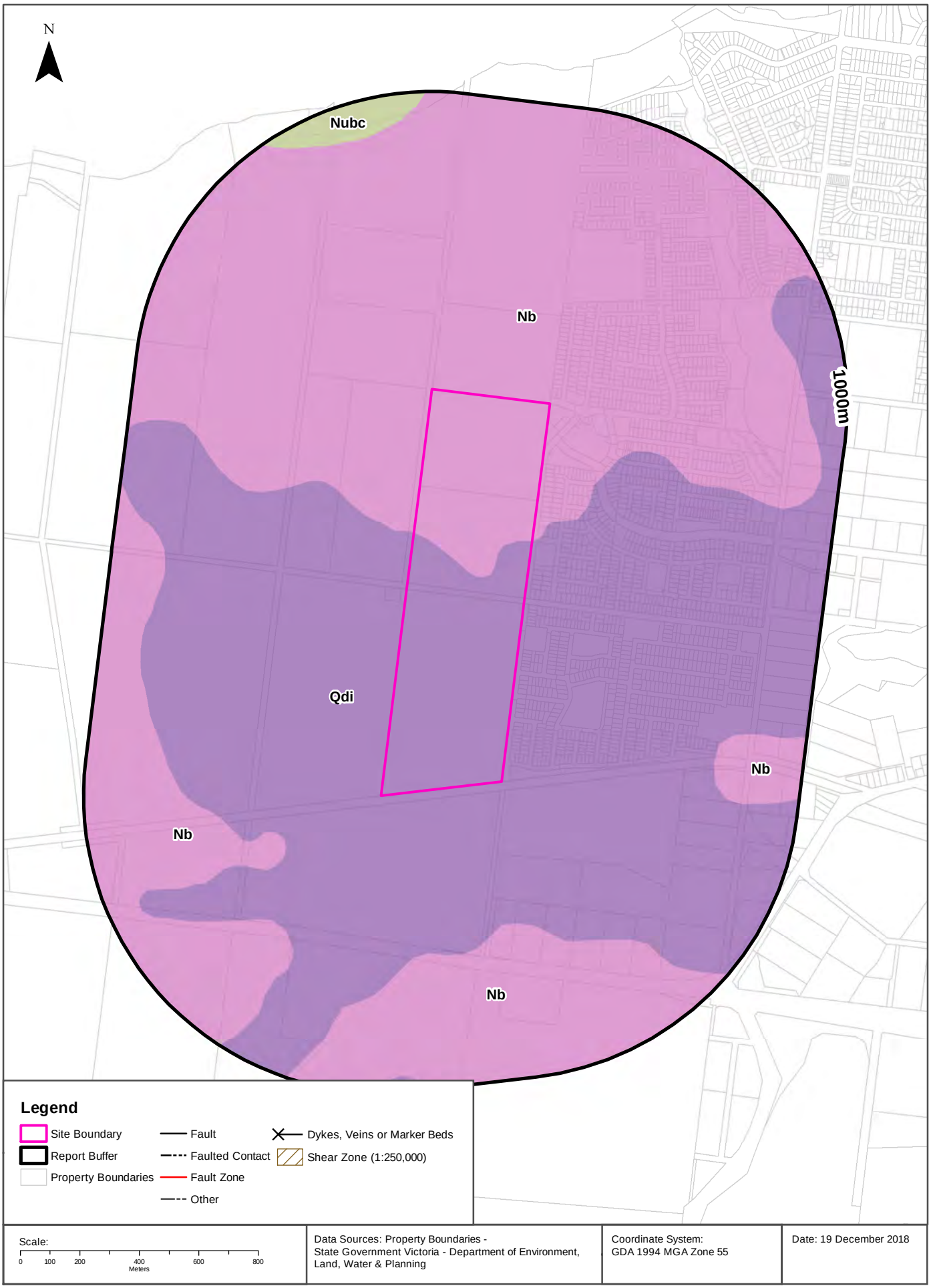
Mine Shaft Locations were collected by a variety of methods from 1869 in some areas of the state, mainly concentrating in Ballarat and Bendigo. In places a shaft may be recorded multiple times with a different source. In cases where several shaft locations are shown close together (generally with separations less than stated position errors) and they have different sources, it is possible that one shaft has been mapped several times. In cases where several shaft locations are shown close together but they have the same information source, it is possible that each shaft location represents a different shaft on the ground.

Historical Mine Shafts within the dataset buffer:

Map Id	Name	Source	Depth (m)	Collar (ft)	Fill/Cap Method	Location Desc	Location Accuracy	Distance	Direction
N/A	No records in buffer								

Geology 1:50,000

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Geology

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Geological Units

What are the Geological Units onsite?

Symbol	Name	Description	Geological Age	Lithology	Dataset
Nb	Brighton Group(Nb): generic	Gravel, sand, silt: variably calcareous to ferruginous sandstones and coquinas; marine to nonmarine	Miocene to Pliocene	silt material (significant); sand (significant); gravel material (significant)	1:50,000
Qdi	source-bordering dune deposits (Qdi): generic	Sand, silt, clay: inland dune deposits, some swamp deposits; mostly source-bordering	Pleistocene to Holocene	sand (significant); silt material (significant); clay lithology (significant)	1:50,000

What are the Geological Units within the dataset buffer?

Symbol	Name	Description	Geological Age	Lithology	Dataset
Nb	Brighton Group(Nb): generic	Gravel, sand, silt: variably calcareous to ferruginous sandstones and coquinas; marine to nonmarine	Miocene to Pliocene	silt material (significant); sand (significant); gravel material (significant)	1:50,000
Nubc	Clifton Springs Tuff (Nubc): generic	Tuff, basalt plug	Miocene to Miocene	tuff (major proportion); basalt (minor proportion)	1:50,000
Qdi	source-bordering dune deposits (Qdi): generic	Sand, silt, clay: inland dune deposits, some swamp deposits; mostly source-bordering	Pleistocene to Holocene	sand (significant); silt material (significant); clay lithology (significant)	1:50,000

Geology

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Geological Structures

What are the Geological Faults or Faulted Contacts onsite?

Map Id	Type	Name	Contact	Positional Accuracy	Dataset
No features					1:50,000

What are the Dykes, Marker Beds and Veins onsite?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:50,000

What are the Shear Zones onsite (1:250,000 scale)?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:250,000

What are the Geological Faults or Faulted Contacts within the dataset buffer?

Map Id	Type	Name	Contact	Positional Accuracy	Dataset
No features					1:50,000

What are the Dykes, Marker Beds and Veins within the dataset buffer?

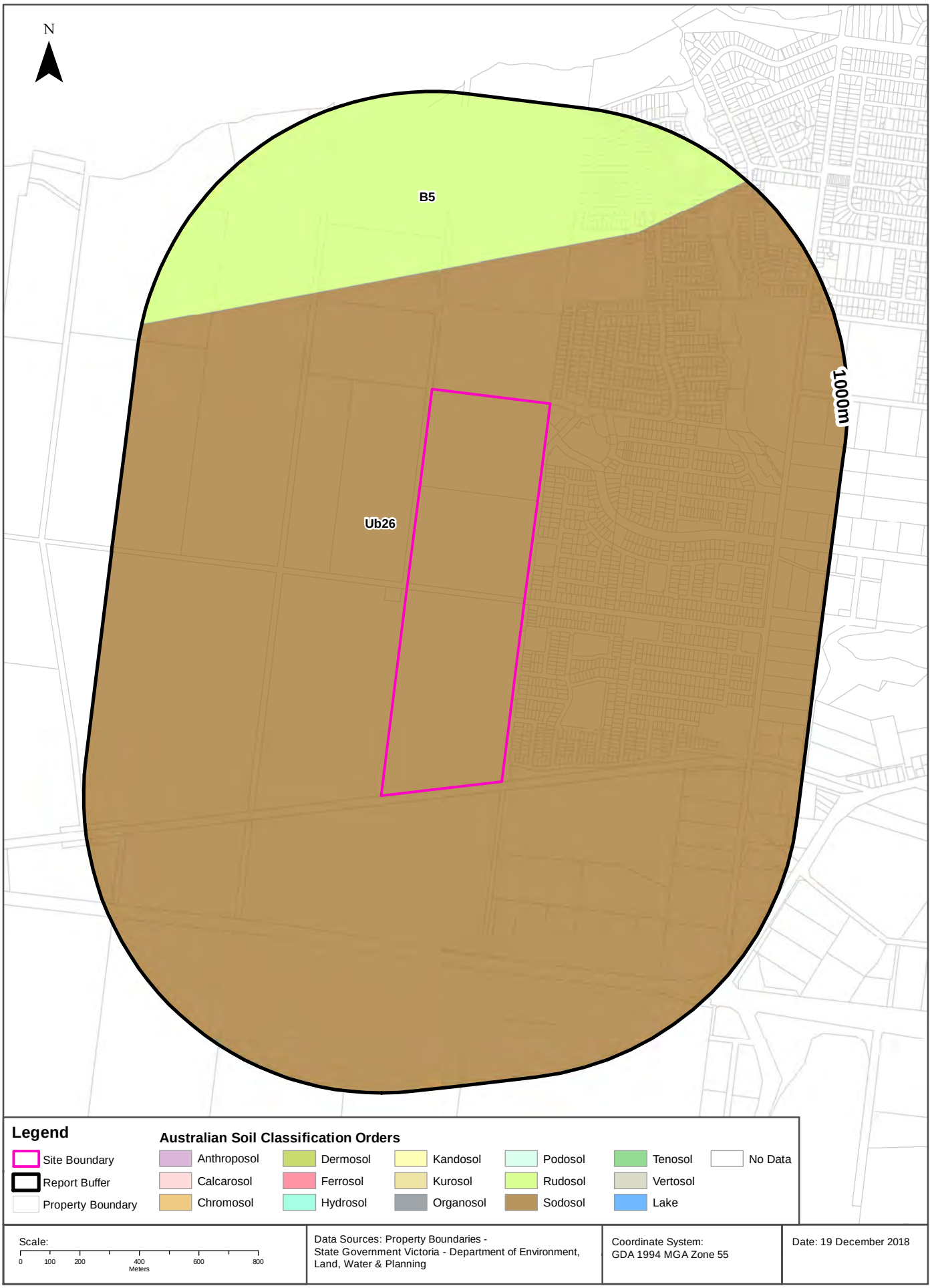
Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:50,000

What are the Shear Zones within the dataset buffer (1:250,000 scale)?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:250,000

Atlas of Australian Soils

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Soil Landscapes

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

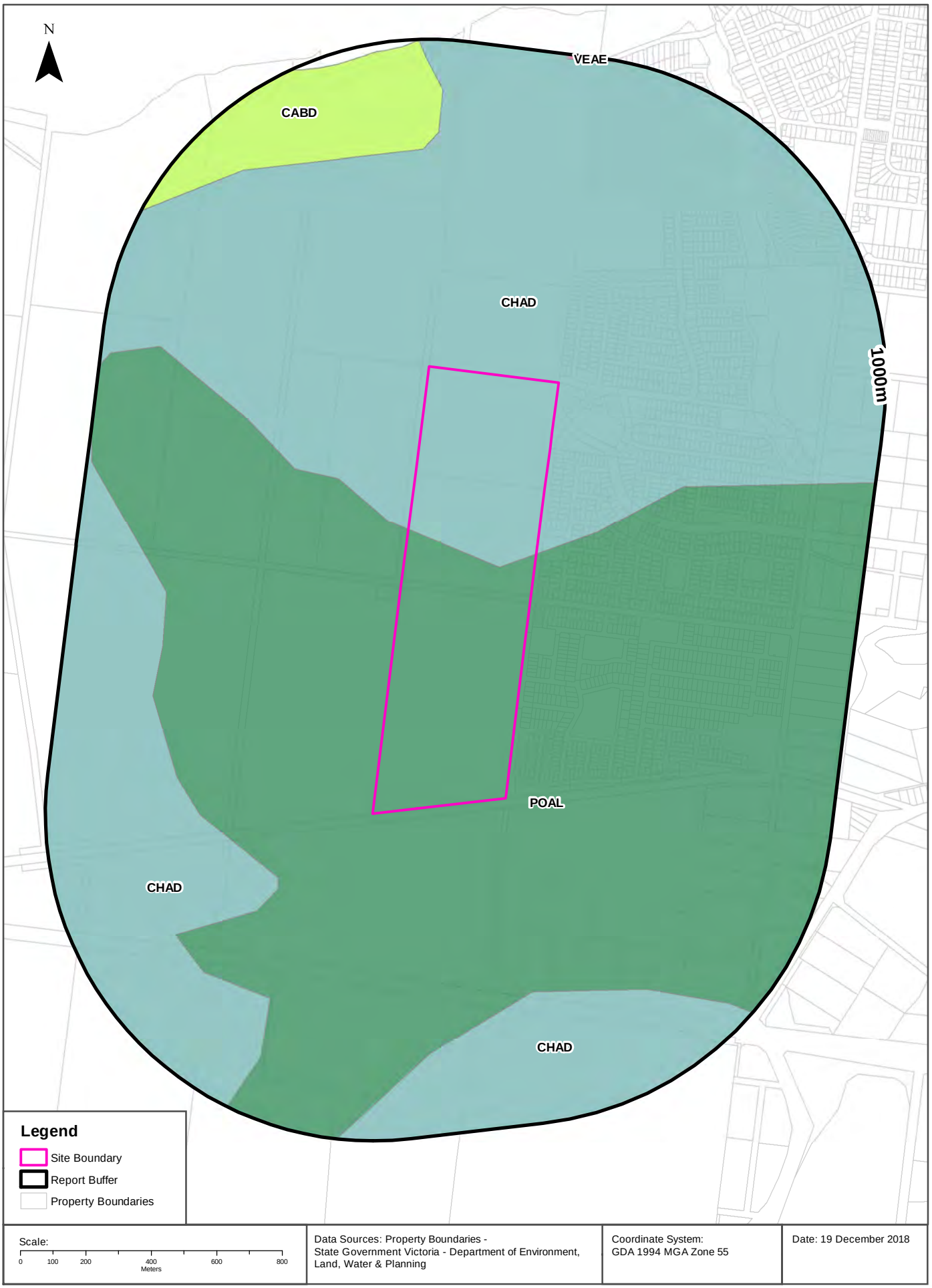
Atlas of Australian Soils

Australian soil types within the dataset buffer:

Symbol	Soil Order	Map Unit Description	Distance
Ub26	Sodosol	Undulating area of hard neutral and alkaline yellow mottled soils (Dy3.42 and Dy3.43), possibly with some areas of cracking clays (Ug5.1 and Ug5.2); layering of soil materials is evident ill places bow the sola of present-day soils and includes sandy ironstone and grey billy; occasional dunes of leached sands (Uc2.2) in the vicinity of coastal plains.	0m
B5	Rudosol	Coastal plains with dunes, swamps, and lakes: plains and dunes of siliceous sands (Uc1.2) and silty soils (Um1) and plains of clay soils (Uf) and (Ug); some terrace remnants where the plains merge with the stream valleys of dark, deep, porous loamy soils (Um6.12) on the lower terraces, and hard alkaline soils (Dr2.23) on the higher terraces.	390m

Victorian Soil Type Mapping

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Soil Landscapes

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

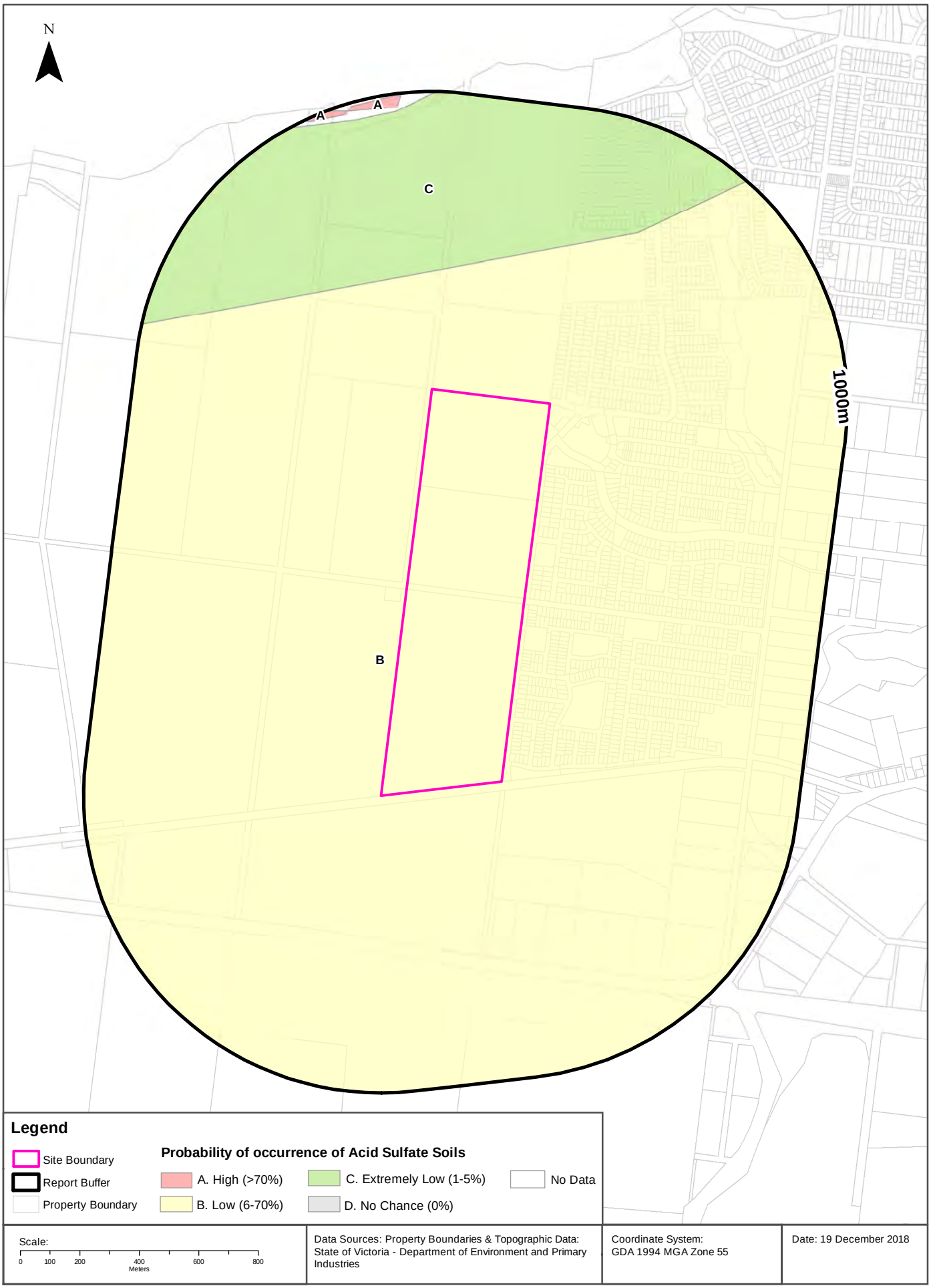
Victorian Soil Type Mapping

Victorian Soil Types within the dataset buffer:

Symbol	Description	Distance
CHAD	Grey Chromosols	0m
POAL	Aeric Podosols	0m
CABD	Calcic Calcarosols	659m
VEAE	Black Vertosols	984m

Atlas of Australian Acid Sulfate Soils

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Acid Sulfate Soils

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

PROBCLASS	Description	Distance
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	390m
A	High Probability of occurrence. >70% chance of occurrence.	954m

Coastal Acid Sulfate Soils

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Coastal Acid Sulfate Soils

What are the on-site Coastal Acid Sulfate Soil types?

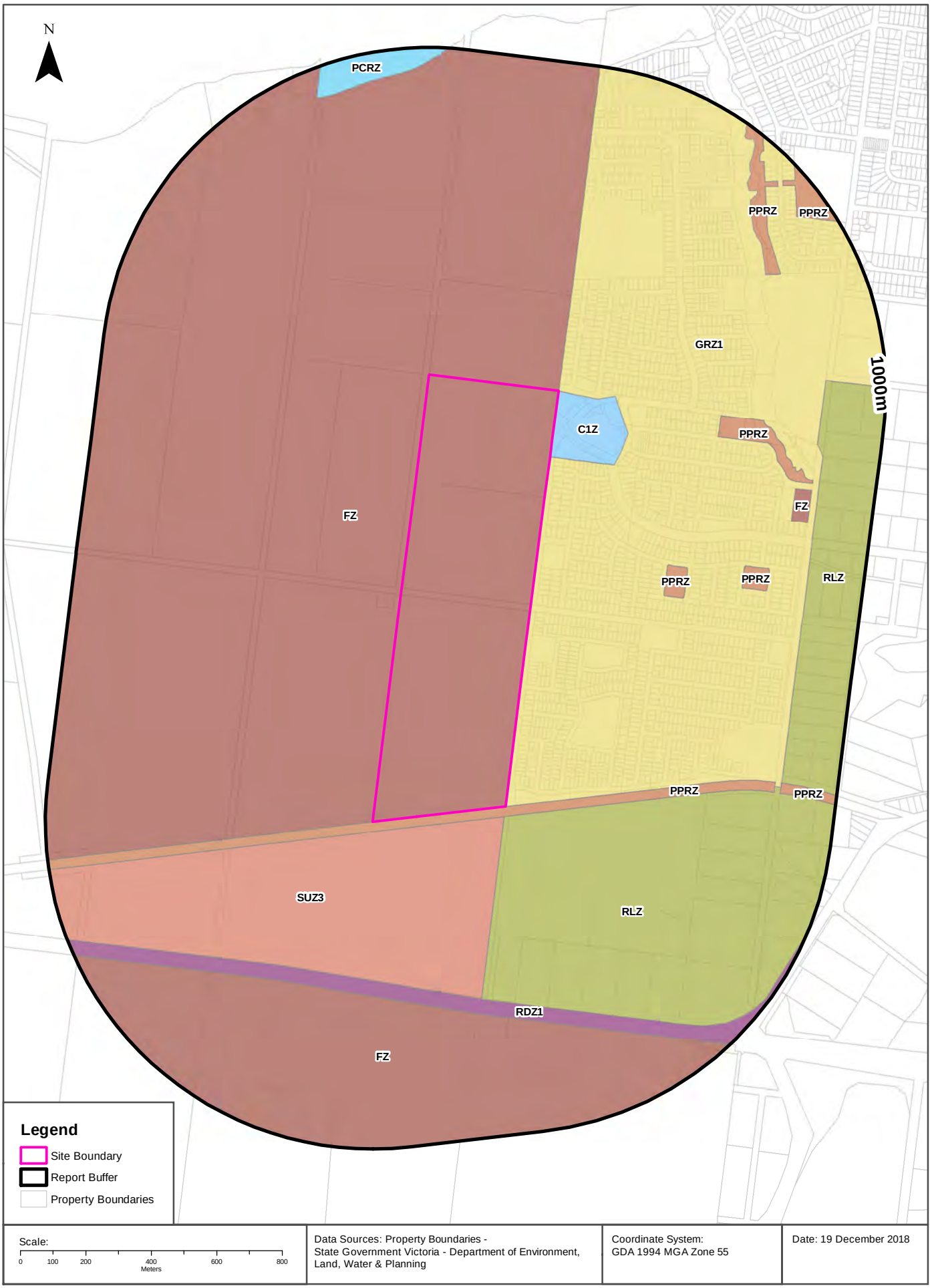
Coastal Acid Sulfate Soil Types
There are no Acid Sulfate areas onsite

What are the Coastal Acid Sulfate Soil types within the dataset buffer?

Coastal Acid Sulfate Soil Types	Distance	Direction
There are no Acid Sulfate areas within the report buffer		

Planning Zones

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Planning Zones

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

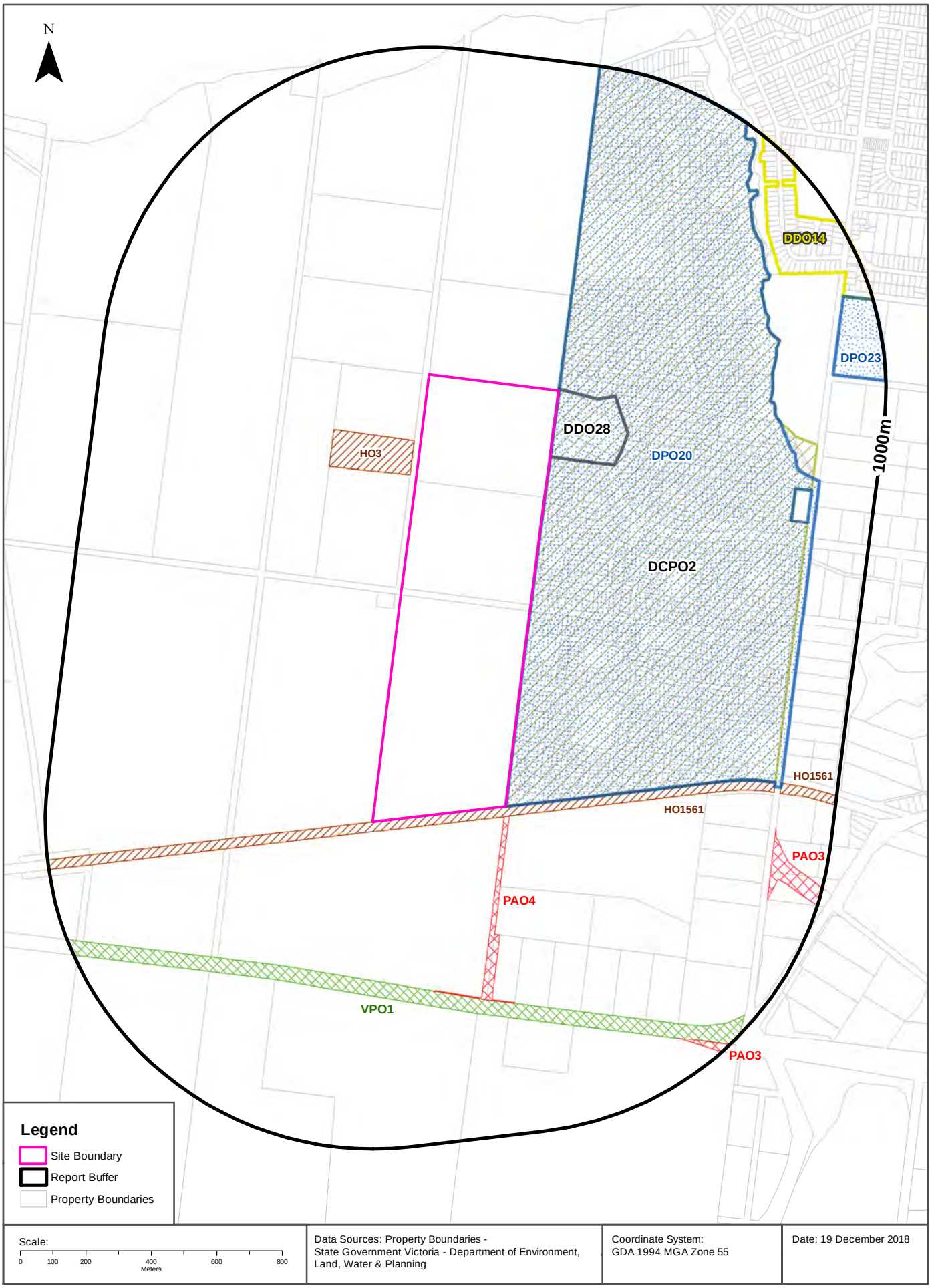
Planning Zones

Planning zones within the dataset buffer:

Zone Code	Description	Distance	Direction
FZ	FARMING ZONE	0m	Onsite
C1Z	COMMERCIAL 1 ZONE	0m	North East
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	0m	North East
PPRZ	PUBLIC PARK AND RECREATION ZONE	0m	South West
RLZ	RURAL LIVING ZONE	30m	South East
SUZ3	SPECIAL USE ZONE - SCHEDULE 3	30m	South West
PPRZ	PUBLIC PARK AND RECREATION ZONE	398m	East
RDZ1	ROAD ZONE - CATEGORY 1	479m	North West
PPRZ	PUBLIC PARK AND RECREATION ZONE	501m	North East
FZ	FARMING ZONE	525m	South West
PPRZ	PUBLIC PARK AND RECREATION ZONE	632m	East
PPRZ	PUBLIC PARK AND RECREATION ZONE	724m	North East
FZ	FARMING ZONE	755m	East
RLZ	RURAL LIVING ZONE	804m	East
PPRZ	PUBLIC PARK AND RECREATION ZONE	827m	South East
PPRZ	PUBLIC PARK AND RECREATION ZONE	901m	North East
PCRZ	PUBLIC CONSERVATION AND RESOURCE ZONE	904m	West

Planning Overlays

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Planning Overlays

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

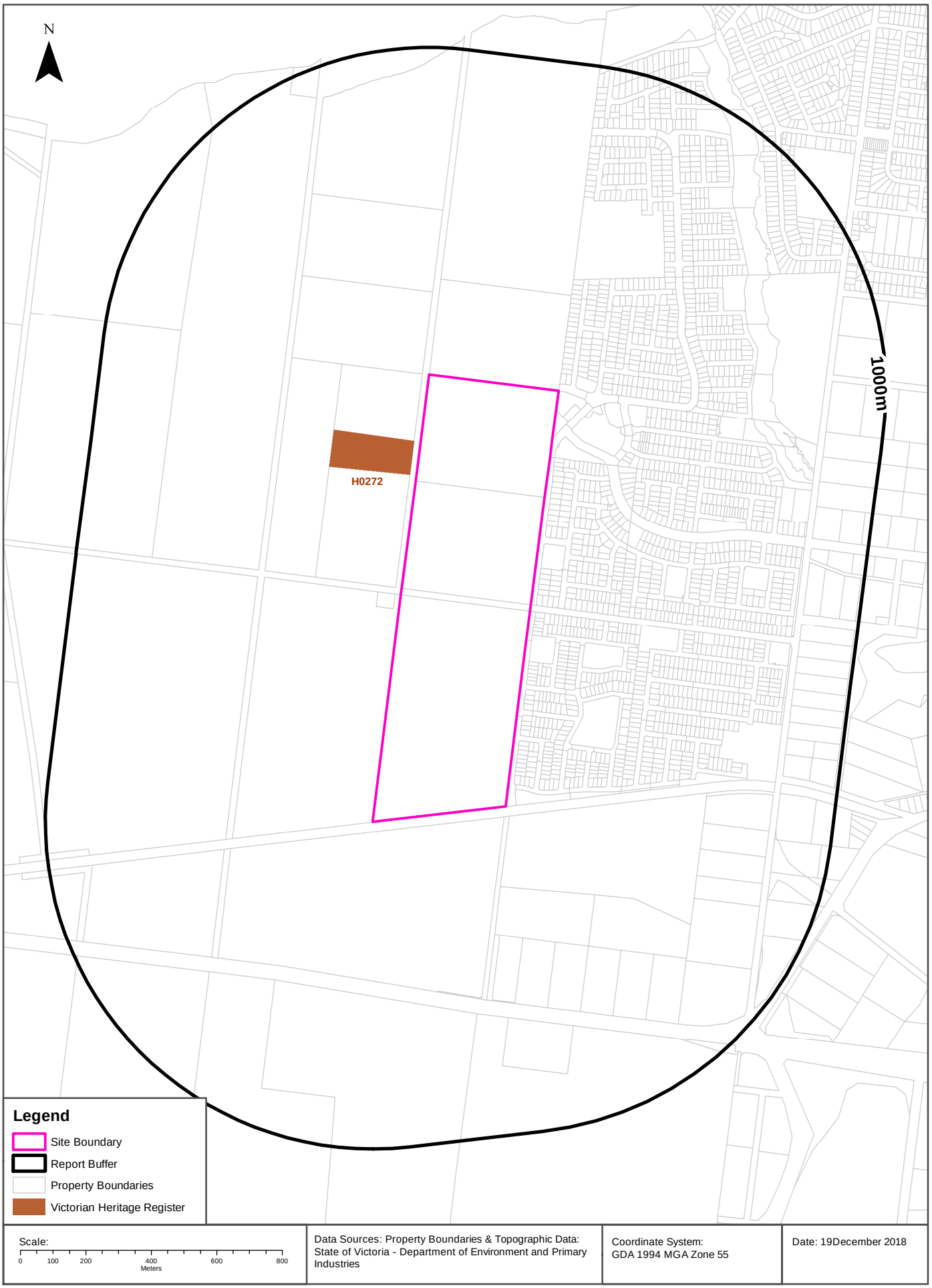
Planning Overlays

Planning overlays within the dataset buffer:

Zone Code	Description	Distance	Direction
DCPO2	DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 2	0m	North East
DDO28	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 28	0m	North East
DPO20	DEVELOPMENT PLAN OVERLAY - SCHEDULE 20	0m	North East
HO1561	HERITAGE OVERLAY (HO1561)	0m	South West
HO3	HERITAGE OVERLAY (HO3)	20m	North West
PAO4	PUBLIC ACQUISITION OVERLAY 4	30m	South
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	479m	West
DDO14	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 14	766m	North East
HO1561	HERITAGE OVERLAY (HO1561)	827m	South East
PAO3	PUBLIC ACQUISITION OVERLAY 3	828m	South East
DPO23	DEVELOPMENT PLAN OVERLAY - SCHEDULE 23	840m	North East
PAO3	PUBLIC ACQUISITION OVERLAY 3	880m	South East

Victorian Heritage Register

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Heritage

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

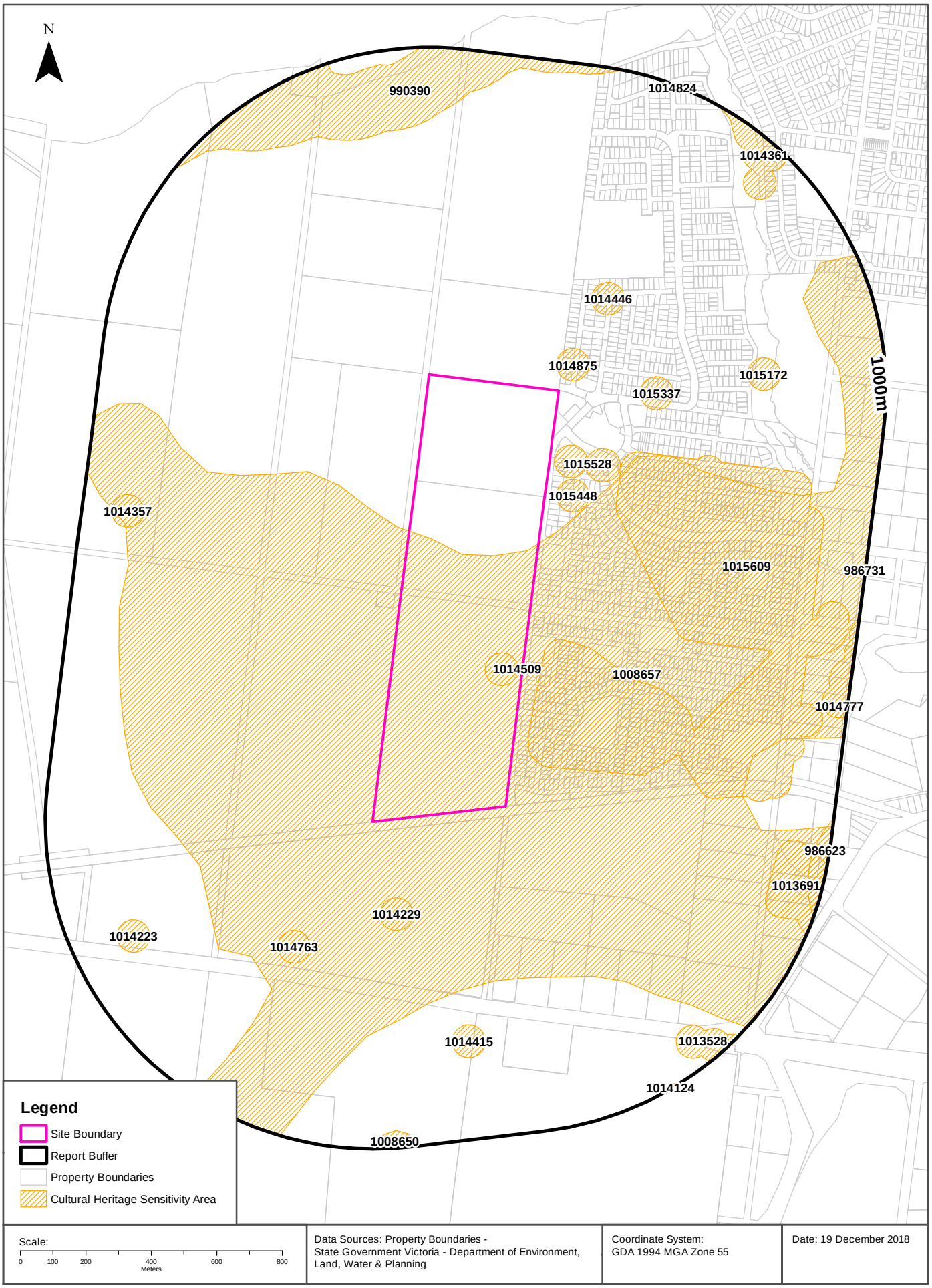
Victorian Heritage Register

What are the Victorian Heritage Register items located within the dataset buffer?:

VHR Number	Description	Distance	Direction
H0272	CORIYULE HOMESTEAD	19m	North West

Cultural Heritage Sensitivity

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Heritage

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

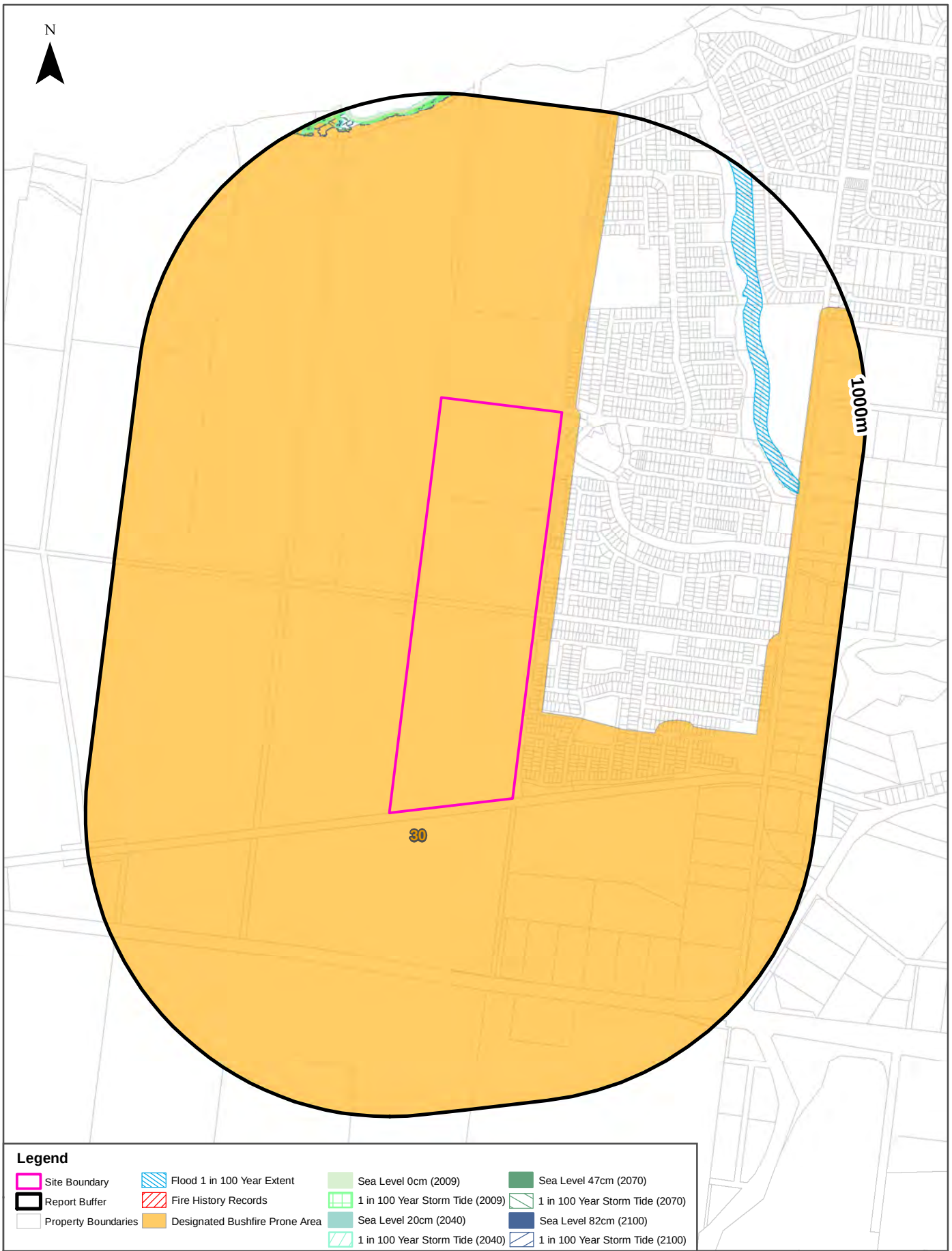
Cultural Heritage Sensitivity

Areas of Cultural Heritage Sensitivity as specified in Division 3 of Part 2 in the Victorian Aboriginal Heritage Regulations 2007, within the dataset buffer:

Map Id	Distance	Direction
1008657	0m	Onsite
1014509	0m	Onsite
1015528	15m	North East
1015448	35m	North East
1014875	41m	North East
1015609	42m	East
1014229	238m	South
1015337	250m	North East
1014446	269m	North East
1014763	401m	South West
1015172	580m	North East
1014415	650m	South
990390	748m	North West
1014223	760m	South West
1014357	810m	West
1014361	834m	North East
1013691	840m	South East
1013528	869m	South East
1014777	920m	East
986623	946m	South East
1008650	946m	South
1014824	978m	North
1014124	989m	South East
986731	994m	East

Natural Hazards

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Natural Hazards

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Bushfire Prone Areas

What are the designated bushfire prone areas within the dataset buffer?

Map ID	Feature	Plan No	LGA	Gazetted Date	Distance	Direction
30	Designated Bushfire Prone Area	LEGL./18-241	GREATER GEELONG	16/05/2018	0m	Onsite

Fire History

What are the fire history records of fires primarily on public land, within the dataset buffer?

Map Id	Fire Type	Fire Key	Season	Fire No	Fire Name	Treatment	Fire Cover	Start Date	Dist (m)	Direction
N/A	No records within buffer									

Flood - 1 in 100 year modelled flood extent

What 1 in 100 year flood extent features exist within the dataset buffer?

Feature	Source	Method	Scale	Modified Date	Distance	Direction
100 Year Flood Outline	Unknown	Little info available		01/01/2000	630m	North East

Natural Hazards

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Victorian Coastal Inundation Sea Level Rise

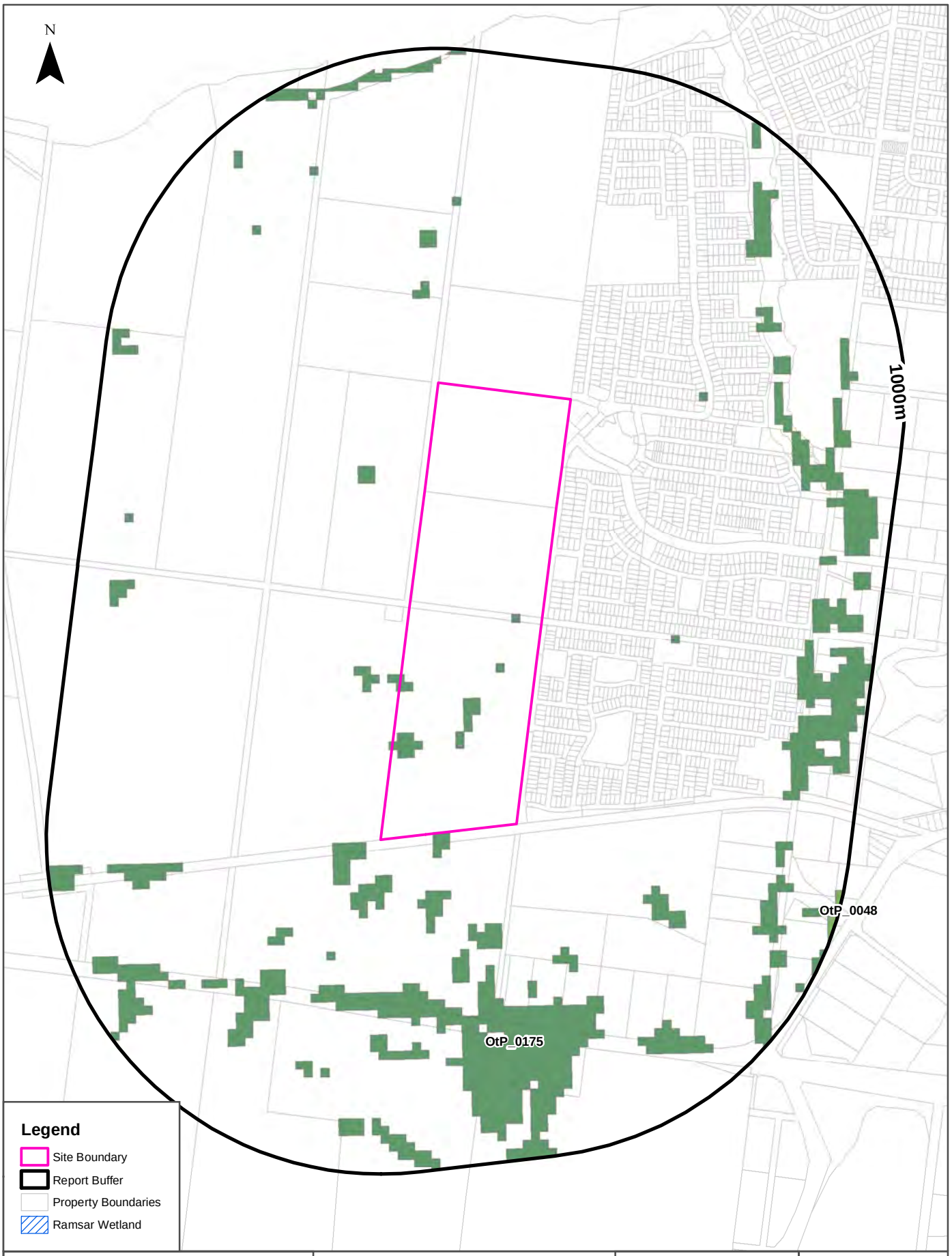
What coastal inundation sea level rise features exist within the dataset buffer?

Description	Distance	Direction
Inundation to 1-in-100 year storm tide level with storm surge increased by 19% plus 82 cm sea level rise (2100)	921m	West
Inundation to 1-in-100 year storm tide level with storm surge increased by 6% plus 20 cm sea level rise (2040)	929m	West
Inundation to 1-in-100 year storm tide level with storm surge increased by 13% plus 47 cm sea level rise (2070)	929m	West
Projected 82cm sea level rise by 2100	931m	North West
Current (2009) inundation to 1-in-100 year storm tide level	932m	West
Projected 47cm sea level rise by 2070	934m	North West
Projected 20cm sea level rise by 2040	938m	North
Current (2009) sea level	941m	North

Victorian Coastal Inundation Sea Level Rise Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning

Ecological Constraints - Native Vegetation 2005 & Ramsar Wetlands

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning

Coordinate System: GDA 1994 MGA Zone 55

Date: 19 December 2018

Ecological Constraints

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Native Vegetation (Modelled 2005 Ecological Vegetation Classes)

What native vegetation exists within the dataset buffer?

Veg Code	EVC Name	EVCCode	Group	Subgroup	Bioregion	Conservation Status	Geographic Occurance	Distance
OtP_0175	Grassy Woodland	0175	Lower Slopes or Hills Woodlands	Grassy	Otway Plain	Endangered	Common	0m
OtP_0048	Heathy Woodland	0048	Heathy Woodlands	Dry and/or better drained	Otway Plain	Least Concern	Common	938m

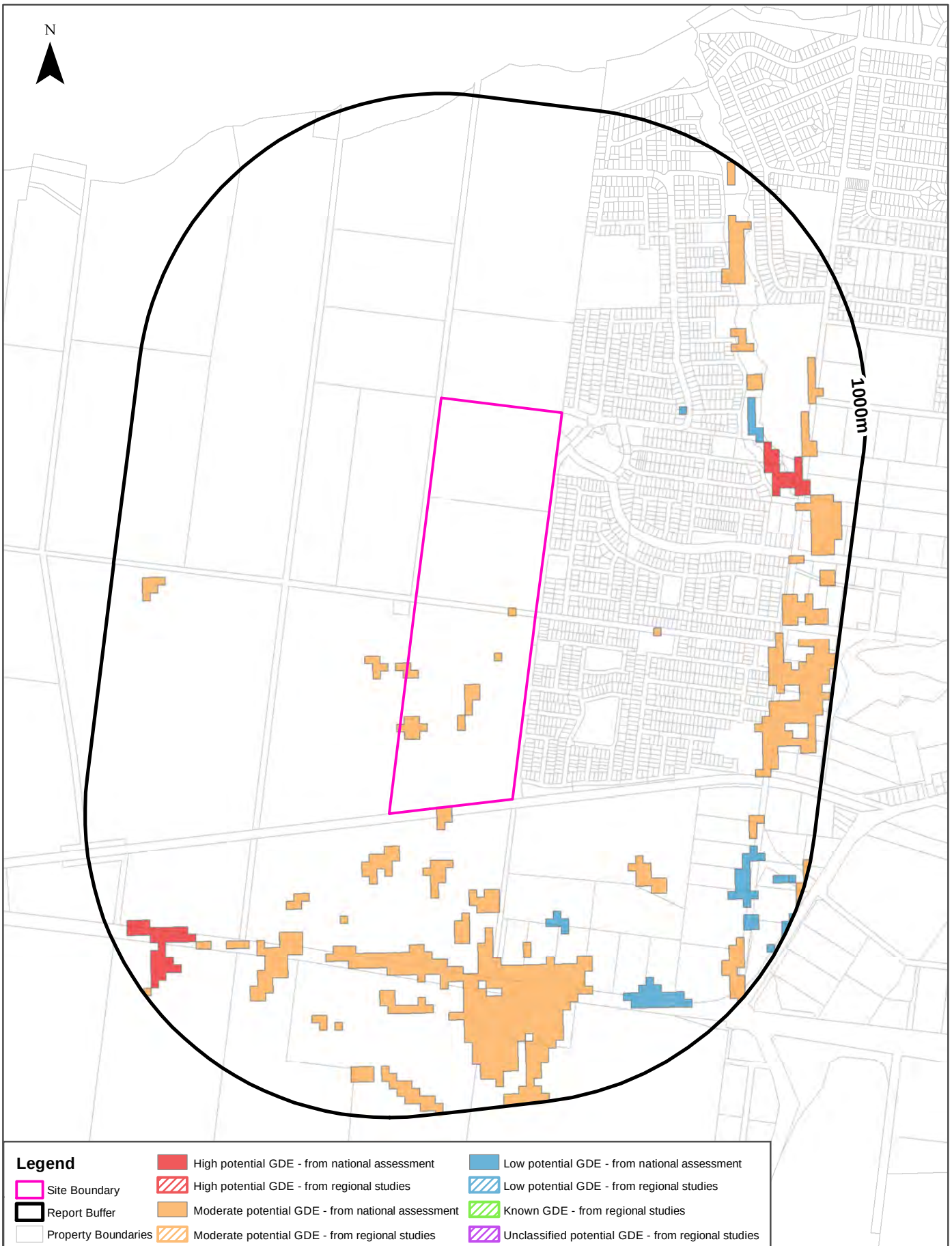
Ramsar Wetlands

What Ramsar wetland areas exist within the dataset buffer?

Map ID	Site Name	Lake Name	Distance	Direction
N/A	No records within buffer			

Groundwater Dependent Ecosystems Atlas

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Ecological Constraints

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

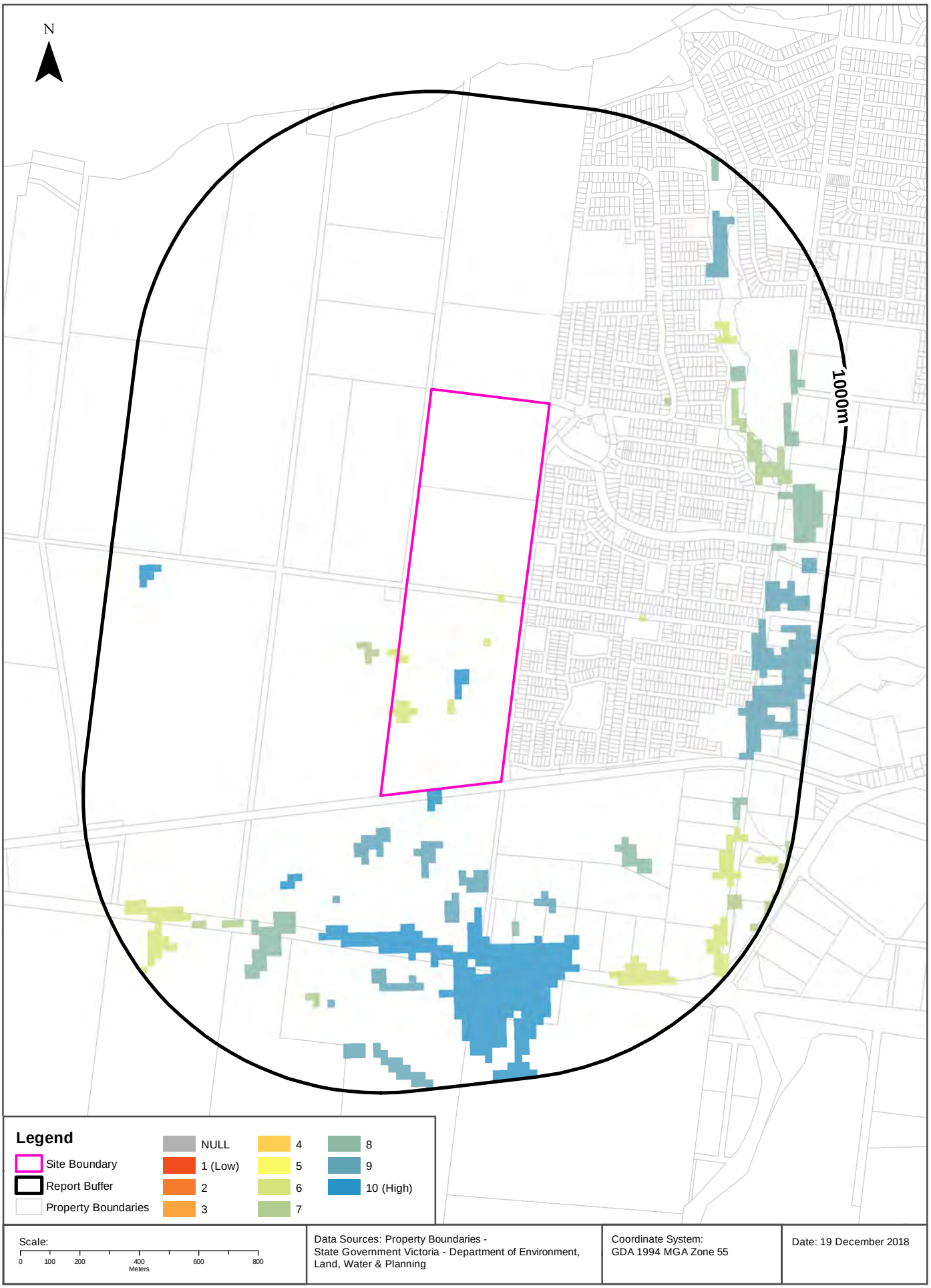
Groundwater Dependent Ecosystems Atlas

What GDEs exist within the dataset buffer?

GDE Type	Name	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial		Moderate potential GDE - from national assessment	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	0m
Terrestrial		Low potential GDE - from national assessment	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	383m
Terrestrial		High potential GDE - from national assessment	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	668m

Inflow Dependent Ecosystems Likelihood

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222



Ecological Constraints

32-70 McDermott Road & 91-125 Coriyule Road, Curlewis, VIC 3222

Inflow Dependent Ecosystems Likelihood

What IDEs exist within the dataset buffer?

GDE Type	Name	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial		6	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	0m
Terrestrial		10	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	0m
Terrestrial		7	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	61m
Terrestrial		9	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	106m
Terrestrial		8	Plains mainly on basalt lavas with many volcanic forms and lakes, partly on weak sedimentary rocks.	Vegetation	Unconsolidated sedimentary	433m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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