



**PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT:
72 GOLF COURSE ROAD, EUROA, VIC.**

Prepared for:

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*Project Ref.: 1889 Euroa
Date: 3 July 2020*


Report Finalisation and Distribution

PROJECT REFERENCE: #1889 Euroa


REPORT TITLE: Preliminary Environmental Site Assessment:
72 Golf Course, Euroa, Vic.

DATE: 3 July 2020

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DOCUMENT STATUS:

Revision No.	Status	Date	Prepared By	Reviewer
0	Final	03 July 2020	AC	GRB

\\AE-SVR1\Atma Files\Atma shared files\PROJECTS\1889 Euroa\02 Word Docs\1889 Euroa_PESA Rev0.docx

DISTRIBUTION LIST:

No. of Copies	Document Status	Date	Copy Type	Distributed to:
1	Final	03/07/2020	pdf	Enclave Living Pty Ltd (Care of: Jason Tayler, Urban Terrain Consulting)
1	Final	03/07/2020	pdf	Atma Environmental (File)

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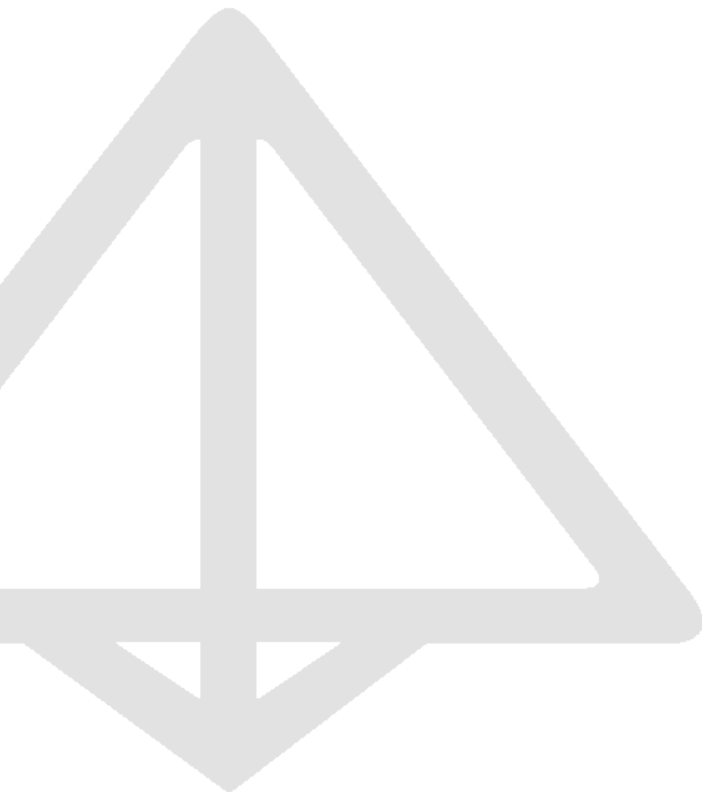
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Acronyms & Units

ABC	Ambient Background Concentration	meq	Milliequivalents
ACL	Added Contaminant Limits	mg	Milligram
ACM	Asbestos Containing Materials	mg/kg	Milligram per Kilogram
ADWG	Australian Drinking Water Guidelines	mg/L	Milligram per Litre
agl	Above Ground Level	mg/m³	Milligram per cubic meter
AHD	Australian Height Datum	MGA	Map Grid of Australia
ANZECC	Australian and New Zealand Environment Conservation Council	mm	Millimetre
ARMC	Agriculture and Resource Management Council of Australia and New Zealand	MMBW	Melbourne Metropolitan Board of Works
ANZ		MW	Monitoring well
AS	Australian Standard	N	Nitrogen
ASLP	Australian Standard Leaching Procedure	N/A	Not Applicable
ASS	Acid Sulphate Soil	NAPL	Non-Aqueous Phase Liquid
AST	Aboveground Storage Tank	NATA	National Association of Testing Authorities
B(a)P	Benzo(a)Pyrene	ND	Non-Detectable
bgl	Below ground level	NDD	Non-Destructive Digging
BH	Borehole	NEPC	National Environment Protection Council
BPEM	Best Practice Environmental Management Siting, Design, Operation and Rehabilitation of Landfills	NEPM	National Environment Protection Measure
BTEX	Benzene, toluene, ethylbenzene, xylenes	NHMRC	National Health and Medical Research Council
BTEXN	Benzene, toluene, ethylbenzene, xylenes, naphthalene	OCP	Organochlorine Pesticides
btoc	Below top of casing	OPP	Organophosphate Pesticides
CCME	Canadian Council of Ministers for the Environment	PAH	Polycyclic Aromatic Hydrocarbon
CEC	Cation Exchange Capacity	PAN	Pollution Abatement Notice
CHC	Chlorinated Hydrocarbons	PASS	Potential Acid Sulphate Soil
COC	Chain of Custody	PCB	Polychlorinated Biphenyls
COPC	Contaminant of Potential Concern	PCE	Tetrachloroethylene
CRC	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment	PCPAN	Post Closure Pollution Abatement Notice
CARE		PESA	Preliminary Environmental Site Assessment
CSM	Conceptual Site Model	pH	Potential Hydrogen
CUN	Clean up Notice	PID	Photo-ionisation Detector
CUTEP	Clean up to the Extent Practicable	PIW	Prescribed Industrial Waste
DELWP	Department of Environment, Land, Water and Planning	ppm	Parts per million
DNAPL	Dense Non-Aqueous Phase Liquid	PSI	Preliminary Site Investigation
DO	Dissolved Oxygen	PSR	Priority Sites Register
DQO	Data Quality Objectives	QA/QC	Quality Assurance / Quality Control
DSE	Department of Sustainability and Environment	RL	Reduced Level
DSI	Detailed Site Investigation	RPD	Relative Percentage Difference
EC	Electrical Conductivity	SAQP	Sampling, Analysis & Quality Plan
EIL	Ecological Investigation Level	SCMP	Site Contamination Management Plan
EMP	Environmental Management Plan	SEPP	State Environment Protection Policy.
EPA	Environment Protection Authority	SRW	Southern Rural Water
ESA	Environmental Site Assessment	SVOC	Semi-Volatile Organic Compounds
ESL	Ecological Screening Level	SWL	Static Water Level
GIL	Groundwater Investigation Levels	TCE	Trichloroethylene
GME	Groundwater Monitoring Event	TDS	Total Dissolved Solids
GQRUZ	Groundwater Quality Restricted Use Zone		
GSV	Gas Screening Value		

GW	Groundwater
Ha	Hectares
HHRA	Human Health Risk Assessment
HIL	Health Investigation Level
HSL	Health Screening Level
IWRG	Industrial Waste Resource Guidelines
kg	Kilogram
km	Kilometre
L	Litre
LFG	Landfill Gas
LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of Reporting
m	Metre
MAH	Monocyclic Aromatic Hydrocarbons
mbgl	Metres Below Ground Level

TEQ	Toxic Equivalence Quotient
TIT	Triple Intercept Trap
TOC	Top of Casing
TP	Test Pit
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
µg/m³	Micrograms per cubic meter
UPSS	Underground Petroleum Storage Systems
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
Vic	Victoria
VOC	Volatile Organic Compound
VVG	Visualising Victoria's Groundwater
WHO	World Health Organisation



EXECUTIVE SUMMARY

Atma Environmental Pty Ltd (Atma Environmental) was engaged to undertake a Preliminary Environmental Site Assessment at 72 Golf Course Road, Euroa, Vic. for the purposes of a residential subdivision application. The development application requires an assessment of potential contamination affecting the land (if any) as a result of previous and/or current land uses at the site.

The assessment has included a detailed site historical and environmental review along with a systematic and targeted soil sampling and analysis program on superficial imported and natural soils from 23 sampling locations.

The site is not subject to an Environmental Audit Overlay, is not listed on the EPA Priority Sites, or other environmental registers and is not in an area of known groundwater pollution. Nearby land uses to the north are noted to include a sewerage treatment plant and a former landfill (approximately 500 m distant).

The historical desktop review identified that the site has historically been used as agricultural land since c. 1903. The site is still used for agricultural purposes (grazing) presently.

Features identified onsite include two dams, fencing and a stockyard in the north-eastern corner of the site. Small piles of general waste, namely wood and fencing wire, are noted scattered around the northern section of the site. In general, the site meets aesthetic objectives, however, the stockyard and any above ground wastes should be removed prior to development of the land. No potential ACM structures or materials were identified on site.

Site filling material was encountered in the north-eastern section of the site. Samples of this fill material, which consisted of sandy clay, did not contain any contaminants of concern. Natural soils consisted generally dark brown silt. No soil staining, asbestos waste, odours or areas of stressed vegetation were identified. It is noted that at the time of investigation, the northern section of the site was significantly saturated.

Laboratory analysis of 22 soil samples reported contaminant concentrations below adopted ecological and human health-based investigation and screening levels for low-density residential land use, confirming the site is not contaminated. Low soil pH conditions may require additional engineering or horticultural advice.

Based on the findings of this assessment, the site poses a low potential for contamination; in accordance with the DSE General Practice Note *"Potentially Contaminated Land"* (2005) an Environmental Audit is not required for the proposed sensitive land use. Testing confirms an absence of any soil contamination requiring further investigation, management, or remediation. Based on the outcome of this site assessment the land is considered suitable for the proposed future residential land use.

1 INTRODUCTION

Atma Environmental Pty Ltd (Atma Environmental) was engaged to undertake a preliminary environmental site assessment at 72 Golf Course Road, Euroa, Vic. for the purposes of a residential subdivision permit application.

The site covers an area of approximately 66.8 hectares and is located in the Strathbogie Shire Council area. The current site use is agriculture, featuring two dams and a stockyard. Figure 1 shows the regional location of the site, while Figure 2 provides site details.

The site falls within the Strathbogie Planning Scheme and is zoned for both Farming and Low Density Residential. The site is subject to the Development Plan Overlay–Schedule 4 (DP04). A low-density residential subdivision is expected.

Under Schedule 4 of the Development Plan Overlay (Strathbogie Planning Scheme) the site requires *‘A preliminary soil assessment demonstrating the extent of any contaminated soils that may exist on the subject land and, if detected, a more detailed assessment outlining the location of the contaminated soil, the type of contaminants detected, and the strategies required to be undertaken to decontaminate the affected areas in accordance with the Minister’s Direction No. 1 – Potentially Contaminated Land.’*

Refer to Appendix A for the planning property report & Schedule 4 to the Development Plan Overlay (Strathbogie Planning Scheme).

2 OBJECTIVES AND SCOPE OF ASSESSMENT

2.1 Objectives

The objective of this investigation was to assess the contamination status of the site with respect to future expected sensitive land uses, recommend any further assessment, remediation or management that may be required and to determine if an environmental audit would be required or not.

2.2 Scope of the Environmental Site Assessment

To meet the project objectives, the following scope of work was completed:

- A detailed desktop history and environmental information review to determine (with an appropriate level of confidence) that site contamination is either absent, or to ascertain what decontamination strategies might be required;
- A comprehensive environmental site inspection to identify/confirm areas of potential contamination concern and to verify the findings of the desktop review;
- Collection of 21 grid-based soil samples and two from targeted areas of potential contamination concern.
- Sample analysis and comparison of analytical results against ecological and human health guidelines (for future residential use).

- Preparation of this assessment report summarising all information obtained and make conclusions for planning purposes.

3 SITE IDENTIFICATION AND DESCRIPTION

The site is identified as 72 Golf Course Road, Euroa, Vic. The site is situated within the Strathbogie Shire Council area and is located approximately 170 km north-east of Melbourne's central business district (refer to Figure 1 and Figure 2 for site location and details).

General site information and details of the surrounding land are listed on Table A. No current or former landfill sites were identified within 1 km of the site.

Table A. General Site Information

Site Address	72 Golf Course Road, Euroa, Vic. 3666
Approximate Area	66.8 ha
Lot and Plan Number	Lot 2 PS300732
Local Government	Strathbogie Shire
VicRoads Reference	47 A6
Zoning	Farming Zone (FZ) Low Density Residential Zone (LDRZ) Urban Floodway Zone (UFZ) Development Plan Overlay (DPO) Environmental significance Overlay (ESO) No Environmental Audit Overlay applies
Current Site Use & Features	Agricultural
Proposed Use	Low-density residential subdivision
Adjacent Land Uses	Euroa Arboretum to west, Rural residential, horse track and waste water treatment ponds to north, Euroa Golf Course to east, Hume Freeway & agricultural to south

4 PHYSICAL SETTING

4.1 Topography

The site elevation is approximately 182 m asl to 179 m asl, sloping very gently down to the north-east. The centre of the site sits at 180 m asl. Regionally, the property lies near the bottom of a valley formed by hills located south-west and north-east, with regional drainage to the north-west. Refer to Appendix B for a regional topographic map.

4.2 Hydrology / Surface Water Receptors

There are no permanent water courses on the site, however, there are permanent water features present on the site in the form of two agricultural dams. The largest of the two is located along the northern boundary and the other along the central-west section of the site. The nearest surface water receptor is likely Castle Creek, located approximately 0.75 km to the east of the site. Seven Creeks is also approximately 2.5 km to the east of the site. A map showing nearby surface water features is provided in Appendix B.

4.3 Local and Regional Geology

The Visualising Victoria's Groundwater (VVG) web portal indicates that the site is underlain by the 'Shepparton Formation', which is comprised of Pliocene to Holocene age alluvial clay, sand, silt and gravel material. Refer to Appendix B for geological details.

4.4 Regional Hydrogeology and Groundwater Bore Search

The Victoria Department of Environment, Land, Water and Planning (DELWP) website was consulted to obtain a 'Groundwater Resource Report' for the site. Refer to Appendix B for a copy of the Groundwater Resource Report. The report indicates that:

- Estimated depth to water table is: <5 m;
- Groundwater Salinity is: 501 – 1,000 mg/L Total Dissolved Solids (TDS);
- Shallow Aquifer is: Quaternary Aquifer (sand, gravels, clay and silts).

Additional information was also extracted from the VVG website indicating the groundwater depth is <5 m across the site. With regards to salinity concentrations, the VVG website indicates the majority of the site presents values ranging from 1,000 to 3,500 mg/L TDS, with the northern section of the site ranging between 500 to 1,000 mg/L TDS. Refer to Appendix B for additional groundwater depth and salinity maps.

Based on the estimated TDS, local groundwater is expected to fall into 'Segments A2, B & C', as defined by the *State Environment Protection Policy (Groundwaters of Victoria)*. The protected 'Segment A2 to C' beneficial uses of groundwater are highlighted on Table B.

Table B. Protected Beneficial Uses of Groundwater

Beneficial Use	Groundwater Segment (TDS mg/L)						
	A1	A2	B	C	D	E	F
	(0-600)	(601-1,200)	(1,201-3,100)	(3,101-5,400)	(5,401-7,100)	(7,101-10,000)	(>10,001)
Water dependent ecosystems and species	✓	✓	✓	✓	✓	✓	✓
Potable water supply (<i>Desirable</i>)	✓						
Potable water supply (<i>Acceptable</i>)		✓					
Potable mineral water supply	✓	✓	✓	✓			

Agriculture and irrigation (Irrigation)	✓	✓	✓				
Agriculture and irrigation (Stock Watering)	✓	✓	✓	✓	✓	✓	
Industrial and commercial	✓	✓	✓	✓	✓		
Water-based recreation (Primary Contact Recreation)	✓	✓	✓	✓	✓	✓	✓
Traditional Owner cultural values	✓	✓	✓	✓	✓	✓	✓
Cultural and spiritual values	✓	✓	✓	✓	✓	✓	✓
Buildings and structures	✓	✓	✓	✓	✓	✓	✓
Geothermal properties	✓	✓	✓	✓	✓	✓	✓

A further search of the VVG database found that there are no registered onsite groundwater bores on the site. Refer to Appendix B a map of the groundwater bores closest to the site.

Based on surrounding topography and proximity of the hydrologic receptors, groundwater is expected to flow in a north-easterly direction towards Castle Creek.

5 RECORDS REVIEW

5.1 Environmental Record Sources

To assess the likelihood of contaminants or hazardous substances that may have migrated to the site, some records reviewed pertain not only to the site itself, but also to properties within a two kilometres radius. The following sources were reviewed in conducting this site assessment:

Online Records (Victoria Unearthed) - EPA

Victoria Unearthed includes information from a range of existing government sources including up-to-date data from the Environment Protection Authority (EPA) Victoria. Victoria Unearthed includes five key datasets from EPA Victoria:

- Priority Sites Register – sites where EPA has issued a clean-up notice or pollution abatement notice under the Environment Protection Act 1970.
- EPA Licenced Sites – sites licenced by EPA
- EPA Environmental Audits – sites with completed environmental audits
- Groundwater Quality Restricted Use Zone – sites that have restrictions of the use of groundwater
- Victorian Landfill Register – locations of current and historical landfills
- It also includes the Environmental Audit Overlays from the Victoria Planning Provisions, indicating where an audit may be required before development.

It also includes Historical Business Listings - information from Victoria's Sands & McDougall business directories (old 'phone books'). A search of the Victoria Unearthed website revealed the

following environmental information, notably:

- That no EPA Certificates/Statements of Environmental Audit have been completed for the site or nearby properties.
- That no Groundwater Quality Restricted Use Zones are present onsite, or in the surrounding area.
- That the site is not listed on the EPA Priority Sites Register (nor are any surrounding properties).
- That a waste water treatment facility is present to the north and west of the site (down gradient, across Euroa Main Road). The site is EPA-licensed and has strict containment provisions. The EPA license for the site has been provided within Appendix B.
- A former landfill point was listed on the Victoria Landfill Register approximately 500 m north-west of the site (edge of waste body not defined). The facility is indicated to have closed in 1998 and to have accepted putrescible and solid inert wastes. The landfill register data extract is provided in Appendix B.
- No historical businesses are listed onsite, or for the surrounding properties.

List of Treatment and Disposal Facilities for Prescribed Wastes (EPA Victoria website)

EPA Victoria maintains a Prescribed Industrial Waste (PIW) database for locating PIW treaters, disposers and permitted transporters. As of this writing, **no** such licensed industry was found within two kilometres of the site, or at the site itself.

5.2 Historical Records Review

Land Titles

Current and historical title ownership has been reviewed and the findings are summarised on Table C below. Refer to Appendix C for copies of the current and parent titles.

Table C. Land Title Review

Certificate of Title	Date from:	Proprietor(s)
Vol 9984 Fol. 348 (Current Title)	01/02/2011 >	Euroa Developments Pty Ltd (<i>Property Development</i>)
	10/02/2006 >	Northview Properties Pty Ltd (<i>Property Development</i>)
	25/11/2003 >	Roman & Anita Anulewicz, (<i>Farmer</i>)
	16/08/1994 >	The President Councillors and Ratepayers of the Shire of Euroa
	26/10/1990 >	Herbert Frederick Walters
Vol 9115 Fol. 477 (Parent Title 1)	14/11/1975 >	Herbert Frederick Walters (<i>Grazier</i>)
Vol 2950 Fol. 986 (Parent Title 2)	11/10/1944 >	Herbert Frederick Walters (<i>Grazier</i>)
	05/03/1932 >	Victor James Walters (<i>Grazier</i>)
	05/03/1918 >	Charles Ernest Forster (<i>Farmer</i>)

	25/01/1918 >	James Edward Atkinson (<i>Farmer</i>)
	25/01/1906 >	James Theophilus Mallet (<i>Farmer</i>)
	13/05/1903 >	Crown Grant to Thomas Mallett (<i>Gentleman</i>)

No past onsite industrial or commercial activity is suggested by the review of past ownership. Past uses may be inferred as being farming and grazing.

Aerial Photographs

A review of aerial photographs of the site and surrounding areas, dating from 1973 to 1987 and selected recent Google Earth images (2011-2015) was completed. Findings are summarised on Table D.

Table D. Aerial Photograph Observations

Year	Observations
1973	<p>Onsite: The site is <u>vacant</u> grazing land with no built structures visible excepting the one (larger) dam located near Euroa Main Rd.</p> <p>Surrounding area: Land use is mainly agricultural, with some sheds noted on the neighbouring property to the north-east. Landfill (active) and water treatment plant to the north are visible. Arboretum land to west is agricultural. Golf course exists to east of site.</p>
1987	<p>Onsite: No changes.</p> <p>Surrounding area: Remains predominantly agricultural. Golf course has been more developed to the east of the site. Construction of the Hume Freeway is underway to the south of the site.</p>
2011	<p>Onsite: No significant changes noted. Second, smaller dam is now visible. Inferred use: <u>grazing</u>.</p> <p>Surrounding area: Hume Freeway has been constructed along the southern boundary of the site. Large water dams have been constructed on properties to the west, east and south of the site. Horse track has been built north of the site. Further development of the water treatment facility is evident to the north of the site and the landfill is now closed.</p>
2015	<p>Onsite: No significant changes noted.</p> <p>Surrounding area: No significant changes noted.</p>

Historical aerial photographs show site as vacant land in 1973 & 1987, likely used for agricultural purposes. The site has remained vacant and used for grazing purposes in the more recent aerial photographs up to present (refer to Figure 2). Man-made embankments bordering the northern dam are visible in the 1973 photograph. Man-made embankments are visible around the central-west dam in the 1987 photograph.

In terms of the land surrounding the site, the aerial photograph review indicated agricultural and rural residential uses. Evidence of water treatment ponds and a former landfill to the north of the site is present in the 1973 and 1987 photographs. Refer to Appendix C for the aerial imagery.

6 SITE RECONNAISSANCE

Allan Campbell of Atma Environmental visited the site on the 18th of June 2019. Photographs are provided in Appendix D. Observations and notes from the site inspection are presented in Table E below, as well as an interview with one of the previous owners of the property (current resident of property immediately to the north-east of the site).

Table E. Environmental Site Inspection Observations

Item	Observations & Descriptions
Occupants & current Site uses / industrial processes	Agricultural – stock grazing. Unoccupied.
Site surfaces	Most of the area of the site is covered in grass, with scattered trees in other areas.
Site slope	The site gently sloped down towards the north-east.
Nearby water features	A dam is present along the northern boundary. Another smaller dam is located in a central-west section of the site.
Buildings & structures	Metal bar stockyard in the north-eastern corner of the site.
Asbestos containing materials	No ACM structures were identified onsite, however, a hazardous materials audit was not part of the present scope of work. No asbestos wastes (e.g. scattered fragments) were observed.
Surface soils	Soils onsite were comprised of dark brown silt.
Site filling/cuttings	Minor evidence of filling was noted onsite in the north-east section of the site (where the stockyard is located). Dam embankments consist of locally-derived fill material.
Fuel/other storage tanks	No above/below ground fuel or waste oil tanks were noted. There are no retail service stations located adjacent to the site.
Dangerous goods	No dangerous good storage onsite. No additional evidence of chemical or other hazardous substances was identified during the site reconnaissance.
Solid wastes	Small wood and fencing wire piles were scattered around the northern section of the site.
Liquid wastes	None noted.
Evidence of potential land contamination	No evidence of suspected land contamination (e.g. staining, odours, stressed vegetation etc.) was identified.
Other observations	Northern section of site saturated.
Interview	Site used for stock grazing for as long as previous owner could remember. Always had issues with flooding/saturation in the northern section. Previous owner conducted site filling to keep the stockyard from flooding.

The site inspection confirmed there are minimal potential areas of environmental concern at the site, however, the stockyard was sampled for best practice.

7 SITE CONTAMINATION POTENTIAL

7.1 Past, Current and Proposed Use of the Property

The historical desktop review identified that the site has historically been used as agricultural land, with cattle grazing being apparent as the recent (and historical) land use.

Features identified onsite included including two dams, site fencing and a stockyard adjacent the north-eastern entrance to the site.

It is understood that the site is earmarked for subdivision and low-density residential use.

7.2 Potentially Contaminating Land Uses

Ministerial Direction No.1 'Potentially Contaminated Land' 1989 (amended 2001) defines "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.

The former Department of Sustainability and Environment (DSE) General Practice Note "Potentially Contaminated Land" (June 2005) goes further to list specific industries and land uses that may result in a 'high' or 'medium potential for contamination'. The DSE General Practice Note then provides an assessment matrix (as per Table F, below) which is intended to guide local authorities in determining planning permit requirements for development by taking into account the determined potential for contamination and the proposed future land use.

Table F. DSE General Practice Note Assessment Matrix

Proposed Land Use:	Potential for Contamination:		
	High	Medium	Low
Sensitive Uses -			
<i>Child care centre, pre-school or primary school</i>	A	B	C
Dwellings, residential buildings, etc.	A	B	C
Other Uses -			
<i>Open Spaces</i>	B	C	C
<i>Agricultural</i>	B	C	C
<i>Retail or office</i>	B	C	C
<i>Industrial or warehouse</i>	B	C	C
Site Assessment Requirements:			
A – An <u>environmental audit</u> is strongly recommended where the planning permit application would allow a sensitive use.			
B – Requires a <u>site assessment</u> from a suitably qualified environmental professional.			
C – General duty under Section 12(2)(b) & Section 60(1)(a)(iii) of the Planning & Environment Act 1987.			

The past and current land use is agricultural and therefore poses a **low** potential for site contamination. In accordance with the DSE General Practice Note, an environmental audit is not required.

Agricultural uses of land can, however, result in localised contamination impacts (as associated with the stockyard and site fill). To confirm the desktop assessment that there is a low overall contamination potential, preliminary site testing was completed.

8 SOIL INVESTIGATION

8.1 Beneficial Uses of Land

The State Environment Protection Policy (*Prevention and Management of Contamination of Land*) (Land SEPP) outlines Land Use Categories and specifies Beneficial Uses which must be protected for each of these categories. Table G summarises the relevant beneficial uses that must be protected for the proposed sensitive land use.

Table G. Protected Beneficial Uses of Land

Beneficial Uses to Be Protected:	Potential Site Land Use:						
	Parks & Reserves	Agri-culture	Sensitive Use:		Recreation Open Space	Comm-ercial	Indus-trial
			High Density	Other			
Maintenance of Ecosystems:							
Natural Ecosystems >	✓						
Modified Ecosystems >	✓	✓		✓	✓		
Highly Modified Ecosystems >		✓	✓	✓	✓	✓	✓
Human Health:	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures:	✓	✓	✓	✓		✓	✓
Aesthetics:	✓		✓	✓	✓	✓	
Production of food, flora & fibre:	✓	✓		✓			

8.3 Assessment Guidelines

The following sections outline the assessment guidelines used to assess the sites condition against the beneficial uses of land.

Maintenance of Ecosystems

For the protection of ecology, contaminant concentrations in soil are compared to the Ecological Investigation and Screening Levels found in the National Environment Protection Council "National Environment Protection (Assessment of Site Contamination) Measure 1999, Amendment Measure

2013 (No. 1)" (NEPM) including the errata update of 30 April 2014.

Ecological Investigation Levels (EILs):

Ecological Investigation Levels (EILs) have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific soil physicochemical properties and land use scenarios, and generally apply to the top 2 m of soil.

The derivation of site-specific EILs was completed for chromium (III), copper, nickel and zinc, using the lowest recorded CEC (1.6 meg/100g) and average pH (4.18 units) and as a conservative screening method, a clay content of 1% is used.

The EILs used are those based on aged contaminant values, relevant for contamination which has been present in soil for at least two years. Clay content was not laboratory measured, therefore as a conservative screening method a clay content of 1% is used in the calculations. This likely underestimate actual clay content conditions at this site. Background contaminant concentrations are not available for the site and thus a typical background concentration for low traffic areas in Victoria was adopted.

Ecological Screening Levels (ESLs):

The NEPM also provides Ecological Screening Levels (ESLs) which have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon (TPH) fractions and which are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse and fine-grained soils and to various land uses and they are generally applicable to the top 2 m of soil.

As a conservative screening method, the most sensitive ESLs have been adopted (i.e. those for coarse-grained soils with the exception of xylene, for which the ESL is more sensitive for fine-grained soils).

Land Use Scenarios:

EILs and ESLs have been developed for three generic land use settings:

- Areas of Ecological Significance
- Urban Residential/Public Open Spaces, and
- Commercial and industrial land uses

An area of ecological significance is one where the planning provisions or land use designation is for the primary intention of conserving and protecting the natural environment (e.g. national parks, state parks, wilderness areas and designated conservation areas). This land use setting is not relevant for the site and is not considered further.

In terms of the proposed sensitive land use development (residential development) the **Urban Residential/Public Open Space** land use setting (providing protection for 80% of species) is considered the most applicable for the future residential development.

All relevant ecological assessment criteria are listed on the analytical summary table (Table 1).

Human Health

Soil sample results are compared to Health-based Investigation and Screening Levels found in the NEPM including the errata update of 30 April 2014.

Health Investigation Levels (HILs):

Health-based 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 but vary for different land use scenarios.

Health Screening Levels (HSLs):

Health Screening Levels (HSLs) for selected petroleum compounds and fractions are applicable for assessing human health risk by the inhalation pathway. 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 greater than 4 m. As a conservative screening method, the results are compared against the HSLs for *silty soils at <1 m depth*.

The NEPM does not provide guidelines for assessment of human health risk from petroleum compounds and fractions by the direct contact pathway; therefore, soil HSLs for direct contact found in the CRC CARE Technical Report No. 10 (*Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater* Friebel & Nadebaum, 2011) are used.

The NEPM also provides guidance for the assessment of asbestos in soils, which requires no visible asbestos to be present in the near surface soils (i.e. top 0.1 m depth), with qualitative HSLs available for the assessment of visible asbestos (where present) and non-visible asbestos (where suspected) in deeper soils.

Land Use Scenarios:

There are four predominant exposure settings that are used when assessing the use or proposed use of a site:

- 'A' - for standard residential with garden/accessible soil including childcare centres, preschools and primary schools;
- 'B' - for high-density residential with minimal garden/accessible soil such as high-rise buildings and apartments;

- 'C' - for parks, recreational open space and playing fields, also includes secondary schools and footpaths; and
- 'D' - for commercial/industrial use including shops, offices, factories and industrial sites

In terms of health-based criteria, the '**A**' **Setting** HILs are considered most relevant for assessment of site suitability for the proposed land use and development. All relevant human health-based assessment criteria are listed on analytical summary Table 1.

Buildings and Structures

The beneficial use may be assessed by a review of physical parameters such as pH, sulphate, redox potential, salinity, or any chemical substance or waste that may have a detrimental effect on structural integrity of buildings or any other structures, such as the stockyard onsite.

The site is not located on an area of probable acid sulphate soil, though further investigation may be required where pH is less than 4.0 (per Victoria EPA Publication 655) and where sulphate exceeds 2,000 mg/kg (NEPM 1999 EIL) or where EC is considered indicative of potentially aggressive soils.

The Australian Standard AS2159-2009 *Piling – Design and Installation*, provides data on the severity of soil sulphate and pH on concrete structures, with a pH >5.5 being considered non-aggressive to all soils above the groundwater.

Aesthetics

In general, the criteria for aesthetics relate to the presence of low-concern or non-hazardous inert foreign material (refuse) in soil or fill resulting from human activity. This may include general wastes, industrial, construction and demolition wastes, soil discoloration, or residual odours.

With reference to Schedule B1, Section 3.6 of the NEPM, circumstances which would trigger a further assessment of aesthetics include: highly malodorous soils or extracted groundwater, hydrocarbon sheen on surface water, significant soil staining (associated with otherwise inert chemical waste), monolithic deposits of low-risk materials, putrescible refuse (potentially generating hazardous levels of methane), and animal burials.

Numerical criteria are not available for assessing aesthetics and its assessment requires a balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use.

Production of Food, Flora or Fibre

This Beneficial Use is assessed with reference to the same criteria as per Maintenance of Ecosystems. Maintenance of Ecosystems criteria are considered applicable, as the guideline values are set to be protective of plant (among other) species. However, it is recognised that these criteria may not necessarily be applicable for some contaminants (such as organochlorine

pesticides, or OCPs).

Alternative criteria may be adopted for the assessment of OCPs in relation to the Beneficial Use *Production of Food, Flora & Fibre*, where OCPs are detected above laboratory limit of reporting at the site.

8.4 Soil Investigation Methodology

Appendix E provides Atma Environmental Pty Ltd's procedures for soil sampling, quality assurance and equipment decontamination. These procedures are comparable with those found in Australian Standard AS4482.1 – 2005, (*Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds*) and AS4482.2-1999 (*Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances*).

On the 18th June 2020, soil sampling was carried out at twenty-one grid (GS01 – GS21) and two targeted sampling locations (T01 & T02) via spade to a maximum depth of 0.1 m, with targeted samples at the following locations:

- T01 – targeting the embankment of the northern dam consisting of fill material (not analysed due to being similar in nature to GS19 and T02);
- T02 – targeting the stockyard adjacent the north-east entrance to the site;

Refer to Figure 2 for details of the sample locations.

Upon completion of the soil sampling, each location was backfilled. Soil samples were labelled by the sample location where the sample was collected (i.e. GS01 or T01).

New, single use glass containers provided by the laboratory were used in conjunction with latex gloves to avoid contact with sampled soils. All soil samples were preserved on ice during site investigations and during transport to the laboratory. Samples were dispatched to the laboratory with a relevant Chain of Custody (COC, refer to Appendix F). At each sample location, the soil profile was logged and each sample obtained was entered onto a Sample Master List (SML) in the order of collection to track any incidence of potential cross-contamination. All sampling equipment was decontaminated between each sampling location in accordance with Atma Environmental's in-house decontamination procedures.

8.5 Soil Investigation Observations

Natural soils consisted generally of dark brown silt and were encountered through to 0.15 m below ground level (bgl), which was the maximum depth of investigation. Fill material was encountered at sampling locations GS19, T01 and T02 where site filling had been conducted; this material consisted for predominantly sandy clay. For soil description logs refer to Appendix E.

No evidence of suspected land contamination (e.g. ACM, staining, odours, stressed vegetation etc.) was identified during the site inspection. Soil in the northern section of the site was

significantly saturated.

8.6 Laboratory Analysis

The selected sampling schedule was based on a general spectrum of contaminants of potential concern including full, multi-parameter NEPM EIL/HIL screens, metals, total recoverable hydrocarbons (TRHs) [incl. BTEXN], organochlorine pesticides (OCPs), cation exchange capacity (CEC) and pH.

The laboratory used for soil sample analysis was Eurofins. Eurofins uses National Association of Testing Authorities (NATA) accredited methods.

8.7 Soil Analysis Results & Discussion

A comparison of the laboratory analysis results against ecological and human health assessment guidelines is provided on Table 1. Refer to Appendix F for the Chain of Custody documentation and full laboratory reports. A summary of the results is provided below.

Maintenance of Ecosystems & Production of Food & Fibre

All soil sample results were reported below the adopted ecological investigation and screening levels for residential/public open space land use guidelines/criteria.

Human Health

All soil sample results were reported below the adopted human health guidelines/criteria.

Buildings & Structures

The site is not located on an area of probable acid sulphate soil. Generally, soils in regional Victoria can have acidic soil, which may pose a risk of potential impact to buildings and structures. Australian Standard AS3600-2009 ('Concrete Structures') provides a pH guideline of >4 for soils. Testing of 10 samples for pH (CaCl₂ method) yielded an average of 4.18 pH units.

Although the low soil pH values are not a contamination issue *per se*, engineering design input is considered warranted.

Aesthetics

Small amounts of above ground general wastes including timber and fencing wire are scattered around the northern section of the site. No buried or in-ground admixed wastes were noted. It is recommended that all hard wastes should be removed as part of future civil works.

9 QUALITY ASSURANCE AND CONTROL

Atma Environmental's procedures for soil sampling, quality assurance and equipment decontamination were followed. These procedures are comparable with those found in the Australian Standard AS4482.1 – 2005 (*Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds*) and AS4482.2-1999 (*Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances*).

9.1 Decontamination, Trip & Field Blanks

Rinsate blanks should be collected where cross-contamination of samples is likely to impact on the validity of the sampling and assessment process. A trip blank is for the purpose of providing a control sample against contamination potentially introduced during transport of samples from the field to the laboratory. Field blanks are for the purpose of providing a control against contamination potentially introduced to samples during field works.

Rinsate (DECON180620), field (FIELD180620) and trip (TRIP180620) blanks collected during the soil investigation and equipment decontamination process were sent to the laboratory and put on hold, for analysis at a later date if required.

9.2 Blind QC Replicate Testing

Replicate samples, comprising two containers of the same media (sample) are created in the field and submitted to the primary laboratory (DUP) or to a secondary laboratory (SPLIT) in a blind test of reporting accuracy. The results of the check (replicate) sample are assessed against the primary sample in terms of the Relative Percent Difference, or 'RPD' (difference in results divided by the mean of the results, x 100).

The permitted RPD deviance between samples is 'unlimited' for results that are less than 10 times the Limit of Reporting (LOR), 0% - 50% RPD for results between 10 and 20 times the LOR, and 0% - 20% RPD for results greater than 20 times the LOR. Results of the blind QC testing are summarised on Table 2.

The following duplicate sample (with paired primary sample) was analysed as part of this investigation:

- DUP-180620A – analysed for metals
- SPLIT-180620A – analysed for metals
- DUP-180620B – sent to laboratory, placed on hold for analysis at a later date if required
- SPLIT-180620B – sent to laboratory, placed on hold for analysis at a later date if required

Of the 22 individual RPD results calculated, none fell outside of the acceptable limits after consideration for the limit of detection and other factors were considered. This confirms the reporting accuracy of the samples collected. Overall, the lab data is considered to be acceptable reproducible.

10 CONCLUSIONS AND RECOMMENDATIONS

The site is not subject to an Environmental Audit Overlay, is not listed on the EPA Priority Sites or other environmental registers and is not in an area of known groundwater pollution. Nearby land uses to the north are noted to include a sewerage treatment plant and a former landfill (approximately 500 m distant).

The historical desktop review identified that the site has historically been used as agricultural land from c. 1903. The site is still used for agricultural purposes (grazing) presently.

Features identified onsite include two dams, fencing and a stockyard in the north-eastern corner of the site. Small piles of general waste, namely wood and fencing wire, are noted scattered around the northern section of the site. In general, the site meets aesthetic objectives, however, the stockyard and any above ground wastes should be removed prior to development of the land. No potential ACM structures or materials were identified on site.

Site filling material was encountered in the north-eastern section of the site. Samples of this fill material, which consisted of sandy clay, did not contain any contaminants of concern. Natural soils consisted generally dark brown silt. No soil staining, asbestos waste, odours or areas of stressed vegetation were identified. It is noted that at the time of investigation, the northern section of the site was significantly saturated.

Laboratory analysis of 22 soil samples reported contaminant concentrations below adopted ecological and human health-based investigation and screening levels for low-density residential land use, confirming the site is not contaminated. Low soil pH conditions may require additional engineering or horticultural advice.

Based on the findings of this assessment, the site poses a low potential for contamination; in accordance with the DSE General Practice Note *"Potentially Contaminated Land"* (2005) an Environmental Audit is not required for the proposed sensitive land use. Testing confirms an absence of any soil contamination requiring further investigation, management, or remediation. Based on the outcome of this site assessment the land is considered suitable for the proposed future residential land use.

11 LIMITATIONS AND EXCEPTIONS OF INVESTIGATION

The report consists of the scope of work outlined previously. This report describes the work undertaken and has been compiled for the use of Enclave Living Pty Ltd only. Its conclusions are only valid for the purpose for which it was requested. This report is limited in scope and is not a Detailed Site Investigation or an 'environmental audit' within the meaning of the Environment Protection Amendment Act 2018 (Vic).

It is valid only when it is in original and complete form, and any person or company other than Enclave Living Pty Ltd who rely on the report without specific reference to and permission from

Atma Environmental Pty Ltd does so at their own risk. While every care has been taken in the compilation of this report, to the extent that its conclusions are based on the analysis of the data made available by your organisation or by a third party, no responsibility or liability is accepted for consequences arising from either errors or omissions in that data, or from factors or data which were not made available to Atma Environmental Pty Ltd or which Atma Environmental Pty Ltd could not ascertain by reasonable inquiry in the ordinary course of its investigation, nor for any commercial decisions taken as a result of the report.

This report has not included an assessment of potential groundwater, landfill gas risk or vapour contamination. The site assessment has not specifically considered above ground issues such as lead-based paint, or asbestos.

Environmental site assessments document property conditions at the time they are conducted. These conditions may change over time. In addition, contamination (potentially of greater or lesser severity than as reported) may exist at other locations, which have not been tested. The results of additional site testing and future changes in assessment guidelines, criteria or legislative requirements may alter the conclusions of this report and any recommendations flowing therefrom.

12 REFERENCES

Australian Standard AS 4482.1 - 2005, "*Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds.*" 2005.

Australian Standard AS 4482.2 - 1999, "*Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances*", 1999.

Department of Sustainability and Environment General Practice Note "*Potential Contaminating Land Uses*" (June 2005).

Dept of Environment, Land, Water and Planning Victoria, "*Victoria Unearthed website*" <https://www.environment.vic.gov.au/sustainability/victoria-unearthed>

Environment Protection Authority Victoria, "*List of Treatment and Disposal Facilities for Prescribed Wastes.*" <http://www.epa.vic.gov.au>

Environment Protection Authority Victoria, "*List of Issued Certificates and Statements of Environmental Audit.*" <http://www.epa.vic.gov.au>

Friebel, E & Nadebaum, P CRC CARE Technical Report no. 10 CRC for Contamination Assessment and Remediation of the Environment '*Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater, Summary*' Adelaide, Australia, September 2011.

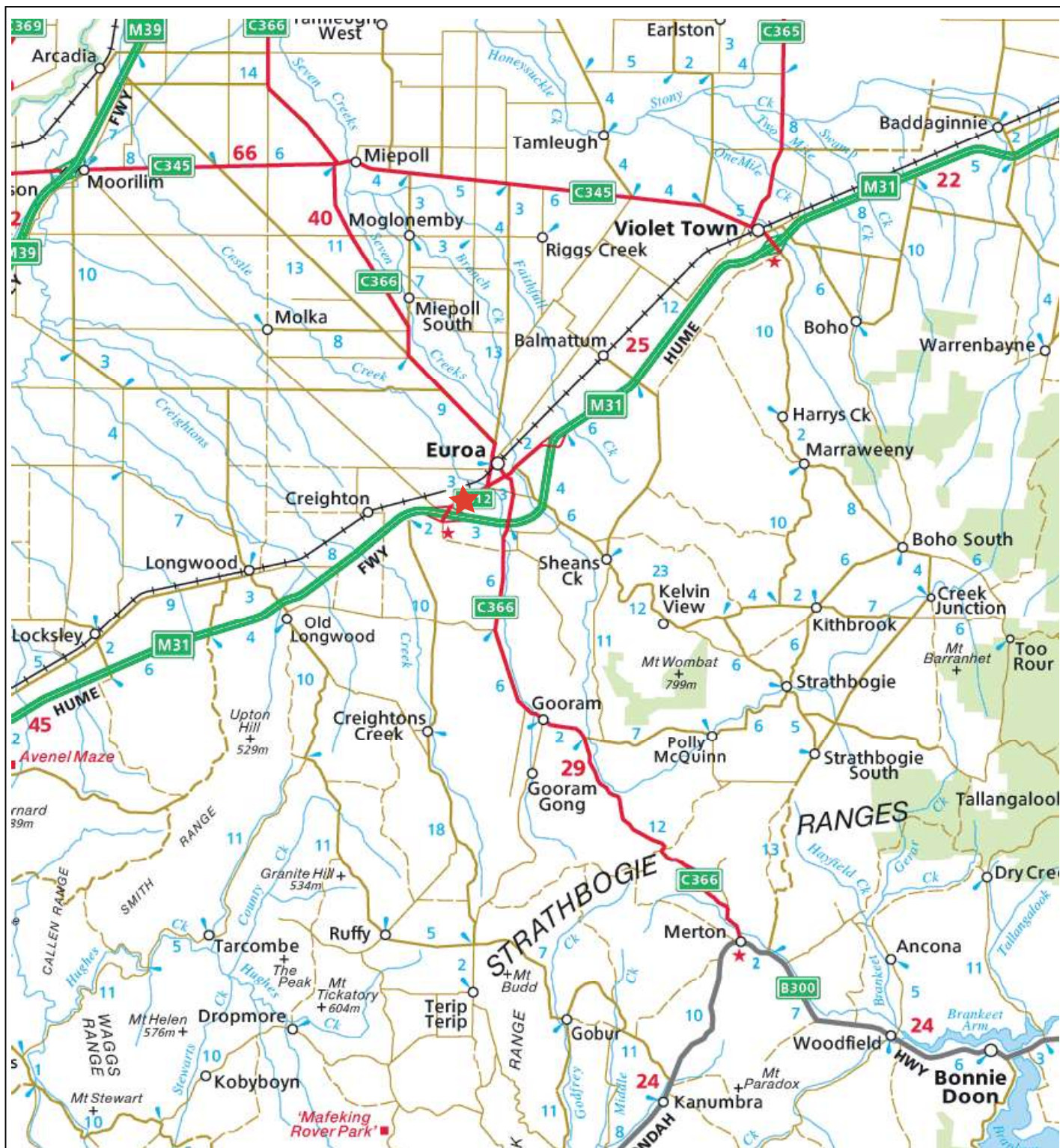
Strathbogie Planning Scheme - *Schedule 4 to the Development Plan Overlay*, 2015

National Environment Protection Council (NEPC), '*National Environment Protection (Assessment of Site Contamination) Amendment Measure (No. 1)*', 2013.

Victoria Department of Planning & Community Development, "*Planning Property Reports.*" www.dcpd.vic.gov.au/planning

Visualising Victoria's Groundwater, "*Groundwater Database Search.*" www.vvg.org.au

Victoria Government Gazette, "*State Environmental Protection Policy (Prevention & Management of Contamination of Land)*", No. S 95, June 2002.



Imagery: Melways Online (2020 ed.)



Atma Environmental



Client:

Enclave Living Pty Ltd

Project: 1889 Euroa - Environmental Site Assessment

Drawn by: A.C. Dated: 25/06/20 Revision: Final

Figure 1. Site Location

★ Approximate Site Location

Approximate Scale:



Table 1. Results Summary vs. Ecological & Human Health Assessment Criteria

PROJECT: Euroa (#1889)
Laboratory Report No: 726730
Page 1 of 1

[illegible]

NOTES:

- "= NEPM HSLs (for vapour intrusion) are Non-Limiting. Therefore, Soil Health Screening Levels for Direct Contact from CRC CARE 2011 Technical Report No. 10 'Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater' are adopted
- "= Less BTEX
- "= Less Naphthalene
- "= EIL is for Cr 3+

Bolded results exceed criteria;

ND means Not Detected;

n/a means Not Available or Not Applicable;

All units are in **mg/kg** unless otherwise stated;

HSLs are for **SILTY** soils at **0 - <1 m** depth

ESLs are the **LOWEST** values for fine/coarse grained soils

EILs for Copper, Chromium, Nickel and Zinc are for aged contaminants, calculated using the NEPM EIL calculators using the following parameters:

Traffic Volume:	High
-Clay Content (%):	1 (Conservative value in the absence of clay content analysis)
-CEC (cmol/kg):	1.5 (Lowest recorded CEC value)
-pH (CaCl2):	4.18 (Average of recorded pH values)

Table 2. Sample Relative Percentage Differences (RPDs)

Date Sampled	Laboratory	Laboratory Report No.	Sample Name	Arsenic (As)	Beryllium (Be)	Cadmium (Cd)	Total Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Selenium (Se)	Zinc (Zn)
	Eurofins		Limit of Reporting	2.0	2.0	0.4	5.0	5.0	5.0	5.0	0.1	5.0	2.0	5.0
	ALS		Limit of Reporting	5.0	1.0	1.0	2.0	5.0	5.0	5.0	0.1	2.0	5.0	5.0
18-Jun-20	Eurofins	726730	GS01	3.6	< 2	< 4	5.8	< 5	< 5	33	< 0.1	< 5	< 2	6.7
	Eurofins	726730	DUP-180620A	3.5	< 2	< 4	5.9	< 5	< 5	7.9	< 0.1	< 5	< 2	7.6
	RPD:			2.8	0*	0*	1.7	0*	0*	122.7	0*	0*	0*	12.6
18-Jun-20	Eurofins	HELD	DUP-180620B	-	-	-	-	-	-	-	-	-	-	-
18-Jun-20	Eurofins	726730	GS01	3.6	< 2	< 4	5.8	< 5	< 5	33	< 0.1	< 5	< 2	6.7
	ALS	EM2010820	SPLIT-180620A	7.0	< 1	< 1	7	< 2	< 5	13	< 0.1	3	< 5	6
	RPD:			64.2	0*	0*	18.8	0*	0*	87.0	0*	18.2	0*	11.0
18-Jun-20	ALS	HELD	SPLIT-180620B	-	-	-	-	-	-	-	-	-	-	-

NOTES:

Where one sample is non-detectable and its paired result is positive, one half the detection limit is used to calculate the RPD.

Grey shaded results exceed 50%, although are based on low results <10 x LOR or due to halving a non-detectable value to calculate the RPD

Yellow highlighted results indicate an RPD above the acceptable limit after an allowance for the effect of non-detect values and/or limits of reporting has been taken

APPENDIX A

Background Documents

PLANNING PROPERTY REPORT

From www.planning.vic.gov.au at 22 May 2020 04:40 PM

PROPERTY DETAILS

Address: **72 GOLF COURSE ROAD EUROA 3666**

Lot and Plan Number: **Lot 2 PS300732**

Standard Parcel Identifier (SPI): **2\PS300732**

Local Government Area (Council): **STRATHBOGIE**

Council Property Number: **23500035.0000**

Planning Scheme: **Strathbogie**

Directory Reference: **Vicroads 47 A6**

www.strathbogie.vic.gov.au

[Planning Scheme - Strathbogie](#)

UTILITIES

Rural Water Corporation: **Goulburn-Murray Water**

Urban Water Corporation: **Goulburn Valley Water**

Melbourne Water: **Outside drainage boundary**

Power Distributor: **AUSNET**

[View location in VicPlan](#)

STATE ELECTORATES

Legislative Council: **NORTHERN VICTORIA**

Legislative Assembly: **EUROA**

Planning Zones

[FARMING ZONE \(FZ\)](#)

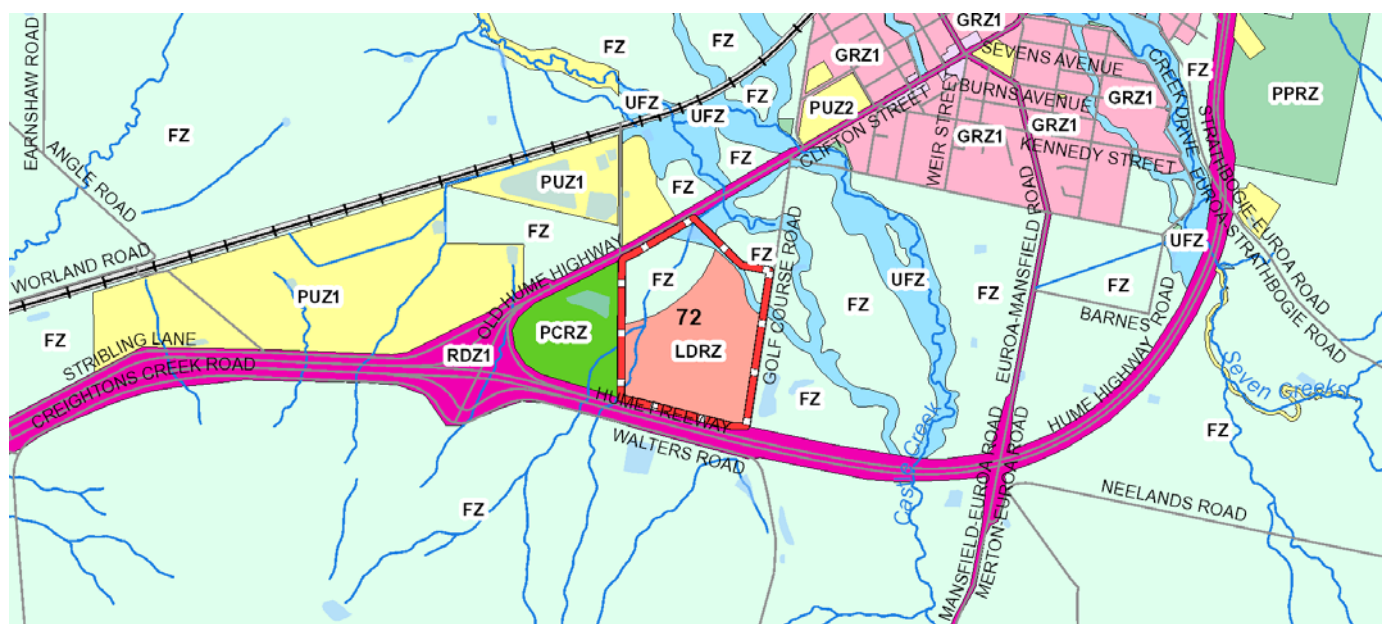
[SCHEDULE TO THE FARMING ZONE \(FZ\)](#)

[LOW DENSITY RESIDENTIAL ZONE \(LDRZ\)](#)

[SCHEDULE TO THE LOW DENSITY RESIDENTIAL ZONE \(LDRZ\)](#)

[URBAN FLOODWAY ZONE \(UFZ\)](#)

[SCHEDULE TO THE URBAN FLOODWAY ZONE \(UFZ\)](#)



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

PLANNING PROPERTY REPORT



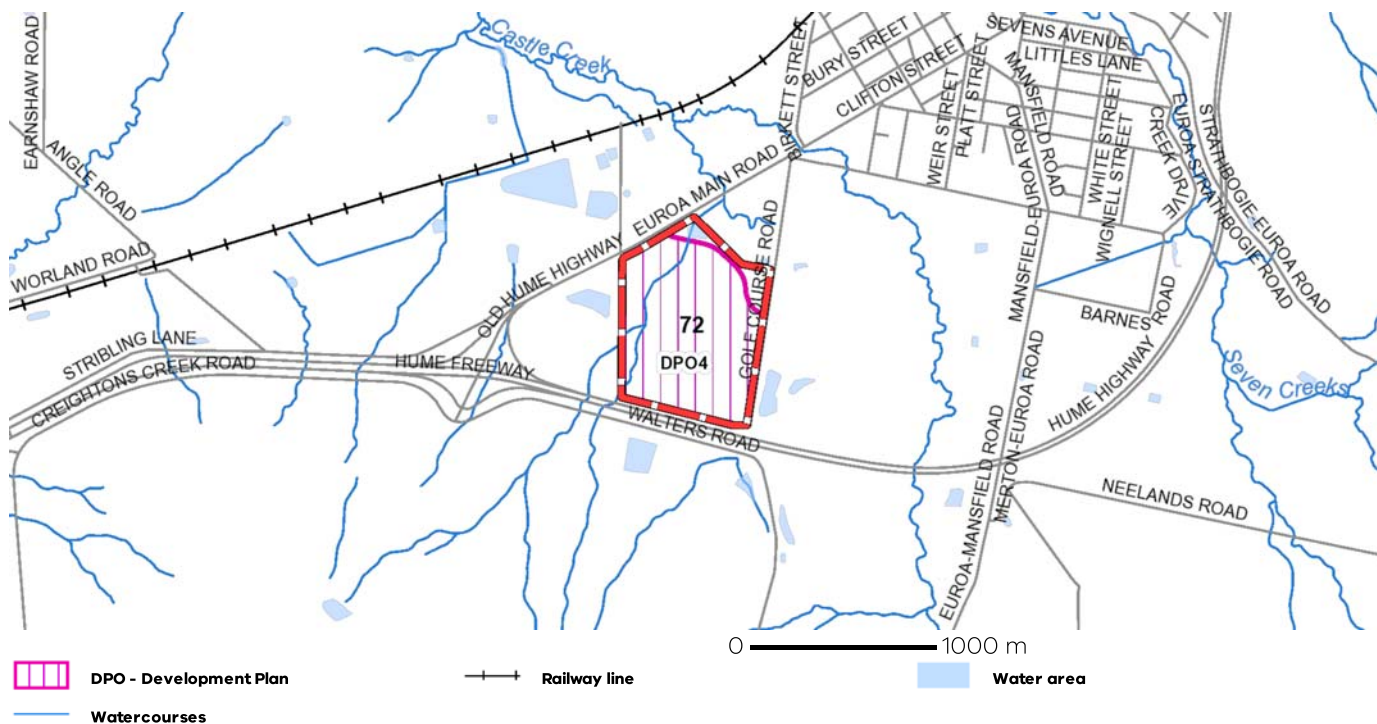
VICTORIA
State
Government

Environment,
Land, Water
and Planning

Planning Overlays

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

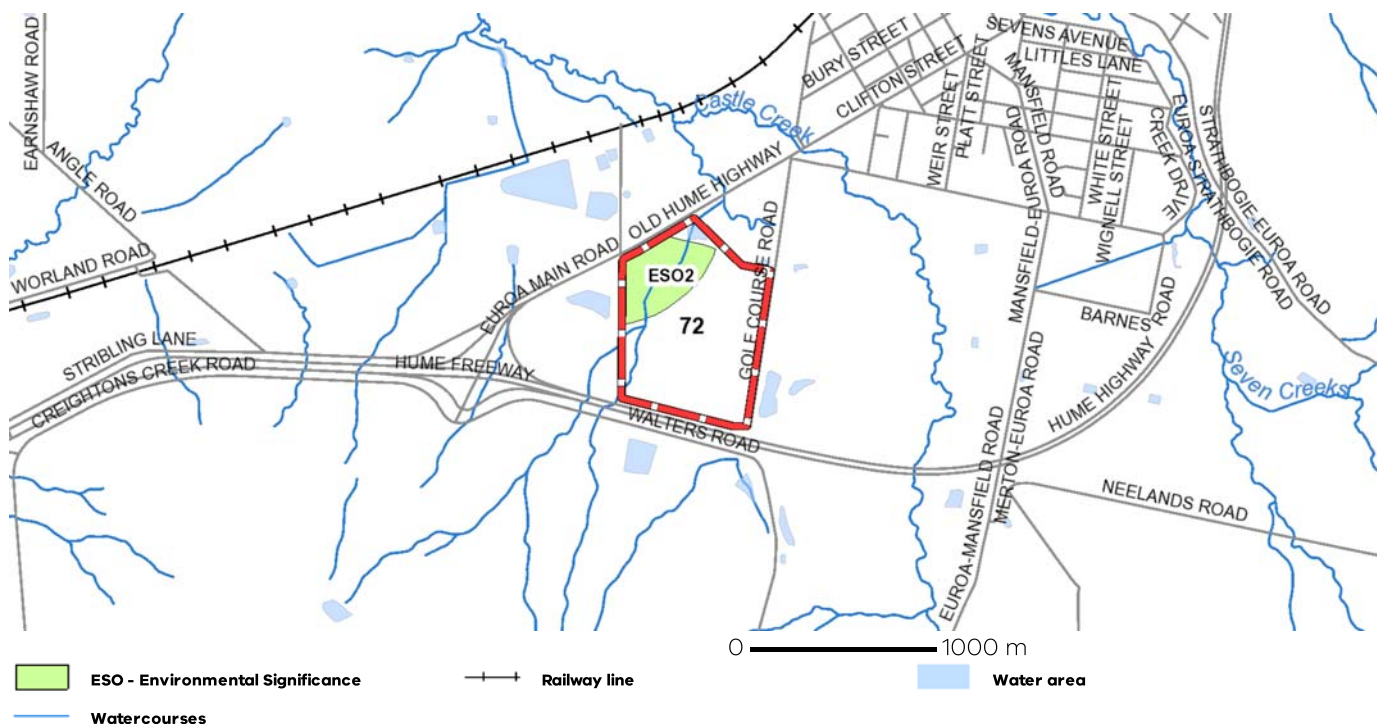
[DEVELOPMENT PLAN OVERLAY - SCHEDULE 4 \(DPO4\)](#)



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

[ENVIRONMENTAL SIGNIFICANCE OVERLAY \(ESO\)](#)

[ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 2 \(ESO2\)](#)

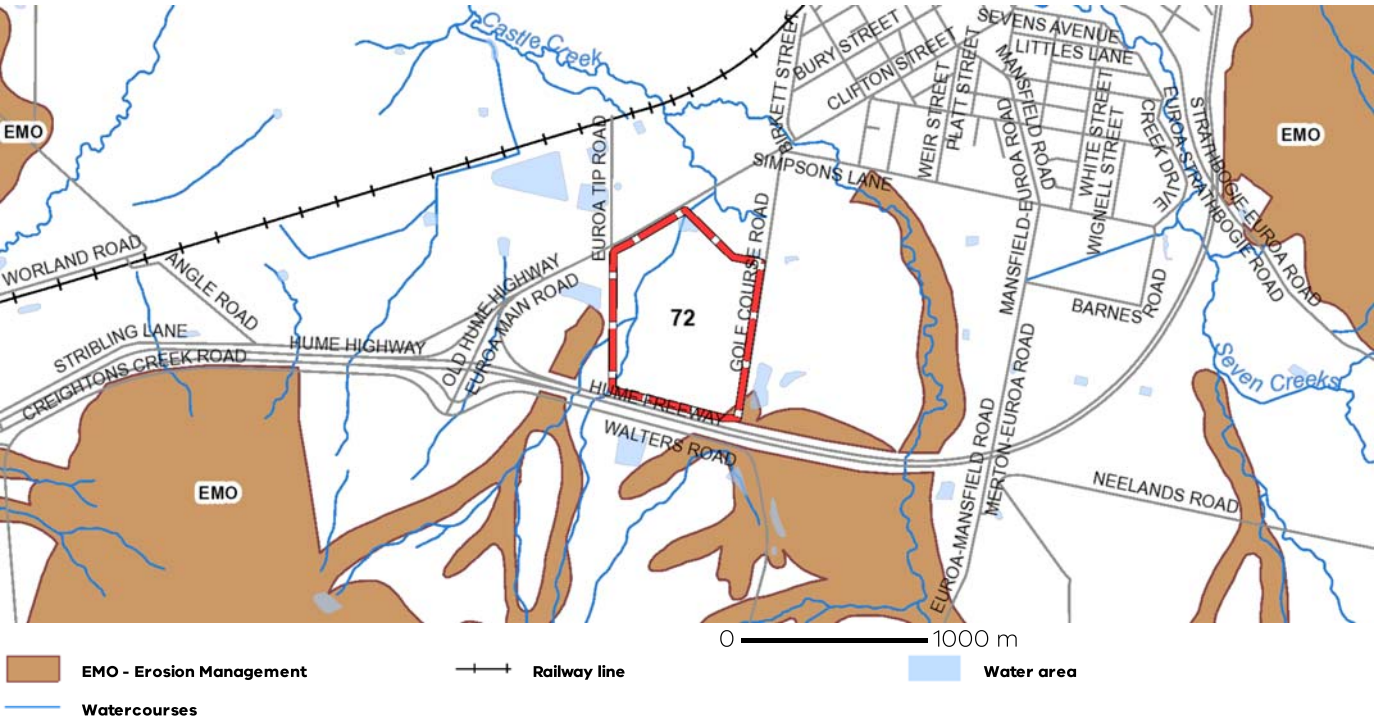


Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

Planning Overlays

[EROSION MANAGEMENT OVERLAY \(EMO\)](#)

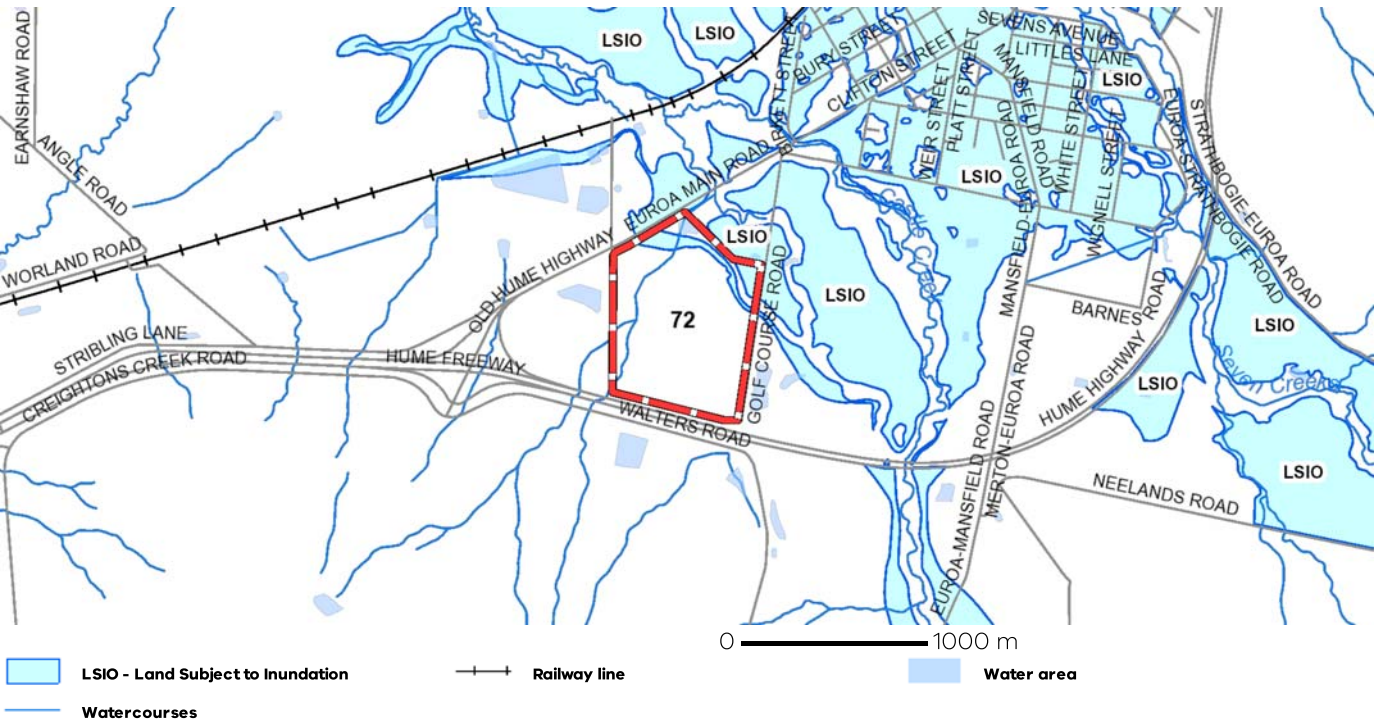
[EROSION MANAGEMENT OVERLAY SCHEDULE \(EMO\)](#)



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

[LAND SUBJECT TO INUNDATION OVERLAY \(LSIO\)](#)

[LAND SUBJECT TO INUNDATION OVERLAY SCHEDULE \(LSIO\)](#)



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

PLANNING PROPERTY REPORT



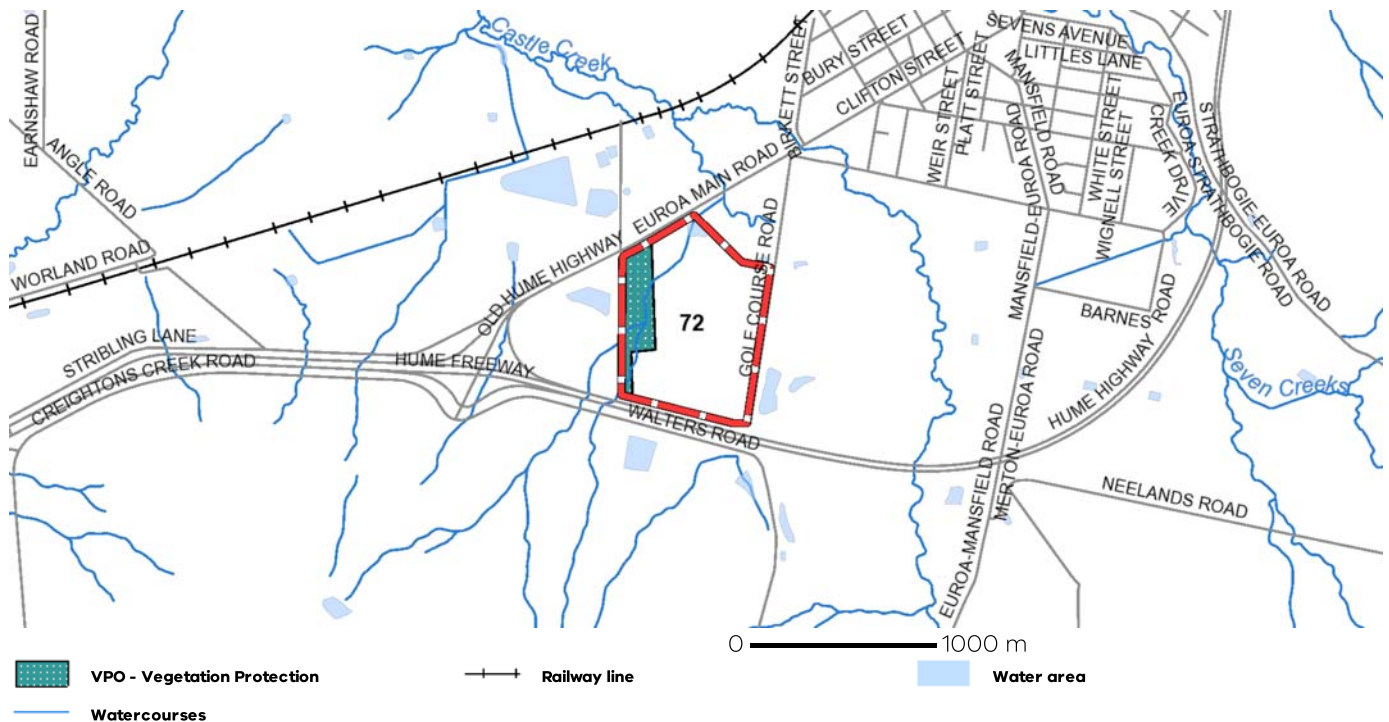
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and Planning

Planning Overlays

[VEGETATION PROTECTION OVERLAY \(VPO\)](#)

[VEGETATION PROTECTION OVERLAY - SCHEDULE 2 \(VPO2\)](#)

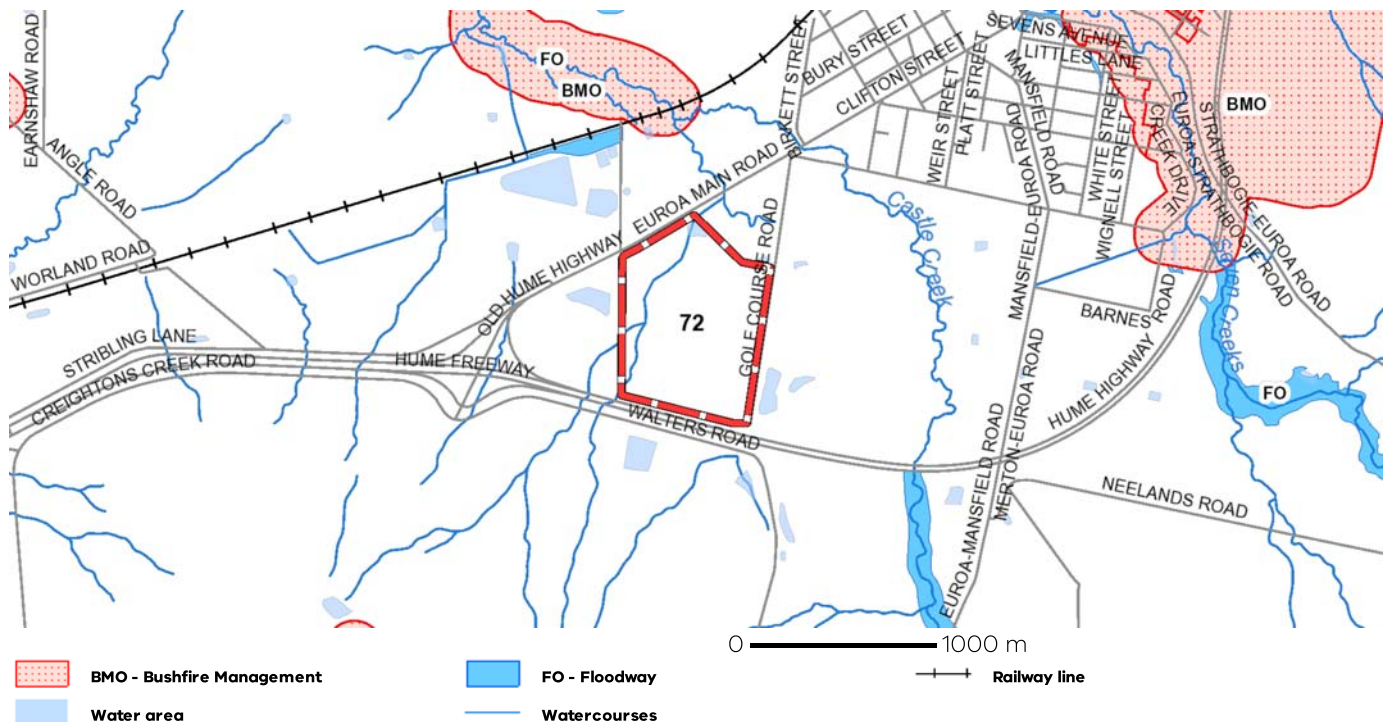


OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

[BUSHFIRE MANAGEMENT OVERLAY \(BMO\)](#)

[FLOODWAY OVERLAY \(FO\)](#)



Further Planning Information

Planning scheme data last updated on 20 May 2020.

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

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

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

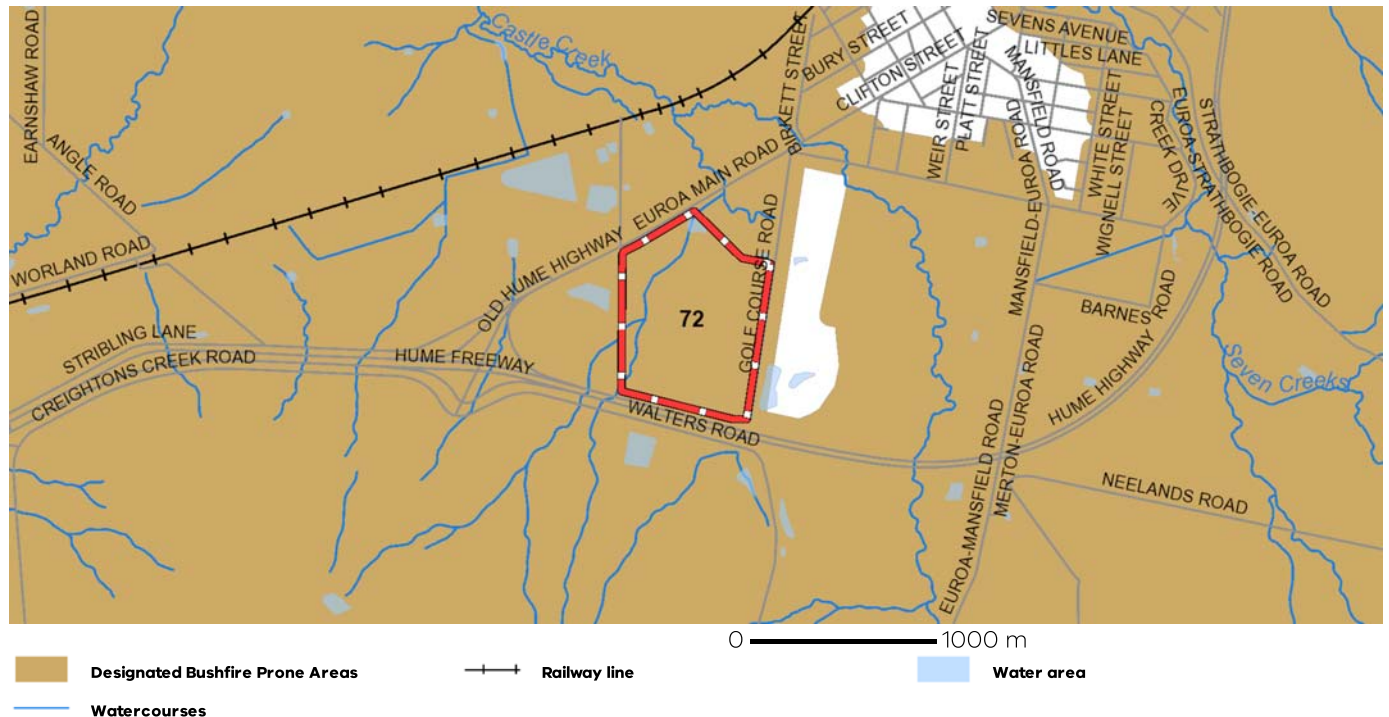
To view planning zones, overlay and heritage information in an interactive format visit <https://mapshare.maps.vic.gov.au/vicplan>

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

PLANNING PROPERTY REPORT

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.



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 <https://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 <https://www.vba.vic.gov.au>

Copies of the Building Act and Building Regulations are available from <http://www.legislation.vic.gov.au>

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>

12/11/2015
C32**SCHEDULE 4 TO THE DEVELOPMENT PLAN OVERLAY**

Shown on the planning scheme map as **DPO4**.

EASTERN GATEWAY, EUROA**1.0**12/11/2015
C32**Requirement before a permit is granted**

Before any new use, development or subdivision commences, a development plan must be prepared and approved by the Responsible Authority.

A permit may be granted before a development plan has been prepared for the purpose of:

- subdividing land into two allotments or re-subdividing existing allotments so as to not increase the number of lots;
- a single dwelling on a lot; or
- any buildings and works associated with the ongoing maintenance or operation of the subject site.

2.012/11/2015
C32**Conditions and requirements for permits**

An application for planning permit must include, a stormwater management plan detailing how stormwater will be collected and treated within the development. The plan must be prepared in accordance with the Infrastructure Design Manual and consider ongoing maintenance of the stormwater management measures.

Conditions, as appropriate, must be included on any planning permit issued to subdivide or develop land with regard to recommendations made by the assessments and specialist reports submitted in support of the Development Plan.

3.012/11/2015
C32**Requirements for development plan**

A Development Plan must be prepared to the satisfaction of the Responsible Authority to guide the future subdivision, use and development of land known as Eastern Gateway Euroa.

The Development Plan may be amended to the satisfaction of the Responsible Authority.

The Development Plan must demonstrate, as appropriate:

- General consistency with the *Euroa & Avenel Rural Residential Development – Development Plan Report April 2010*.
- The proposed subdivision layout or the proposed development of the land, including roads, lot size, areas of open space and recreation, pedestrian and bicycle links, equestrian trails, drainage retention areas, and any staging of the development.
- That each lot will be connected to the reticulated sewerage system in accordance with the requirements of Goulburn Valley Water.
- Where accessways cross the 1% AEP floodplain area, they must be designed to ensure no adverse impacts occur to adjoining areas, and to be designed to ensure that the depth of flooding is less than 0.3metres to the satisfaction of the floodplain management authority.
- Building envelope/exclusions area concept plan complying with the following:
 - Building envelopes must not be placed in areas where the water will be greater than 0.3 metres deep in a 1% AEP flood event.
 - Natural overland flow paths should be retained in principle.
 - Appropriate building/infrastructure setbacks (a minimum of 30 metres) to water features.
 - Exclusion areas within the Urban Floodway Zone.

STRATHBOGIE PLANNING SCHEME

- Building and development exclusion areas within remnant vegetation on the western boundary.
- Appropriate setbacks for buildings and infrastructure from the water feature adjacent to the western boundary (a minimum of 30 metres) should be considered in the design layout for the development.
- Responsiveness to the site's constraints and opportunities and adjoining land uses and neighbouring buildings and works.
- The location of any significant environmental, cultural, heritage and/or ecological (faunal and/or floral) features including remnant vegetation, habitat corridors, wetlands, watercourses, fire or flood prone and saline areas, and historic sites.
- Stormwater management methods to ensure no increase in runoff from the site, including the location of any on-site drainage retention facilities.
- Arrangements for the provision of all physical infrastructure to the land including vehicle access arrangements.
- The protection and enhancement of the existing Euroa Arboretum on the western boundary of the site.
- Provision of a landscape buffer along the Euroa Main Road frontage to help define the Eastern Gateway role of the site.

The Development Plan must include, where required by the Responsible Authority:

- An environmental assessment of the land, involving a flora and fauna survey, which, among other things, identifies the health and habitat value of all native vegetation and prepared in accordance with current Biodiversity Assessment Guidelines.
- A vegetation management plan for the remnant vegetation along the western and southern boundaries of the site including consultation with the Euroa Arboretum Committee of Management.
- A drainage and flood investigation report to determine the requirements for mitigating works to manage the retaining and redirecting of flows from the designated water way of the western side of the development plan area. The investigation report will also need to incorporate the Castle Creek anabranch and the minor waterway in the northern portion of the subject site.
- A preliminary survey of the area for aboriginal archaeological sites and preliminary cultural heritage assessment to determine whether a Cultural Heritage Management Plan, in terms of the *Aboriginal Heritage Act 2006*, is required.
- A preliminary soil assessment demonstrating the extent of any contaminated soils that may exist on the subject land and, if detected, a more detailed assessment outlining the location of the contaminated soil, the type of contaminants detected, and the strategies required to be undertaken to decontaminate the affected areas in accordance with the Minister's Direction No. 1 – Potentially Contaminated Land.
- A traffic impact assessment report to the satisfaction of the Roads Corporation (VicRoads), that identifies:
 - Appropriate access and circulation of vehicles on the existing and future road network.
 - The works necessary to accommodate traffic generated by the development and to mitigate any adverse impacts of the development.
 - The trigger points for any additional traffic infrastructure such as upgrades to existing intersections.
 - Considers the broader arterial road network.
- An acoustic report to consider the noise impact and mitigation measures for the Hume Freeway.

STRATHBOGIE PLANNING SCHEME

- An infrastructure plan approved by the Responsible Authority, which identifies the anticipated staging and timing of the provision of infrastructure. The infrastructure plan should address, as appropriate:
 - The provision, staging and timing of stormwater drainage works.
 - The provision, staging and timing of roadworks, both internal and external in accordance with the approved traffic management plan.
 - The provision, staging and timing of landscaping works for local parks, stormwater drainage reserves and regional landscaping works.
 - The securing of the infrastructure and utility services as may be necessary by way of an agreement pursuant to Section 173 of the *Planning and Environment Act 1987* or by other means acceptable to the Responsible Authority.
 - Any other infrastructure related matter reasonably requested by the Responsible Authority associated with the subdivision of land.
 - Identification of any agency or person responsible for provision of particular items of infrastructure.

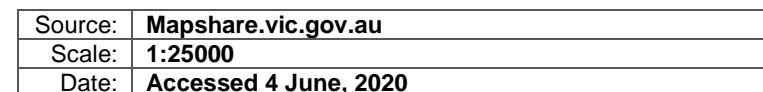
Before approving the Development Plan, the Responsible Authority must consider the following, and may include conditions where appropriate:

- The environmental, ecological, landscape, archaeological, cultural heritage and historical values and features of the site.
- The provision of at least 100,000 litres of static water storage where reticulated water is not available and at least 20,000 litres where reticulated water is available for fire fighting purposes and onsite use.
- The need for any agreement to be made pursuant to the provisions of Section 173 of the *Planning and Environment Act 1987* with respect to matters arising from the proposed use and development.
- Any requirements and/or views of the Strathbogie Shire Council and referral authorities regarding urban design and landscaping, traffic works, stormwater disposal, engineering works, environmental protections and enhancement, sewerage, drainage, fire or flood mitigation works required to properly service the proposed use and development of the land.

APPENDIX B

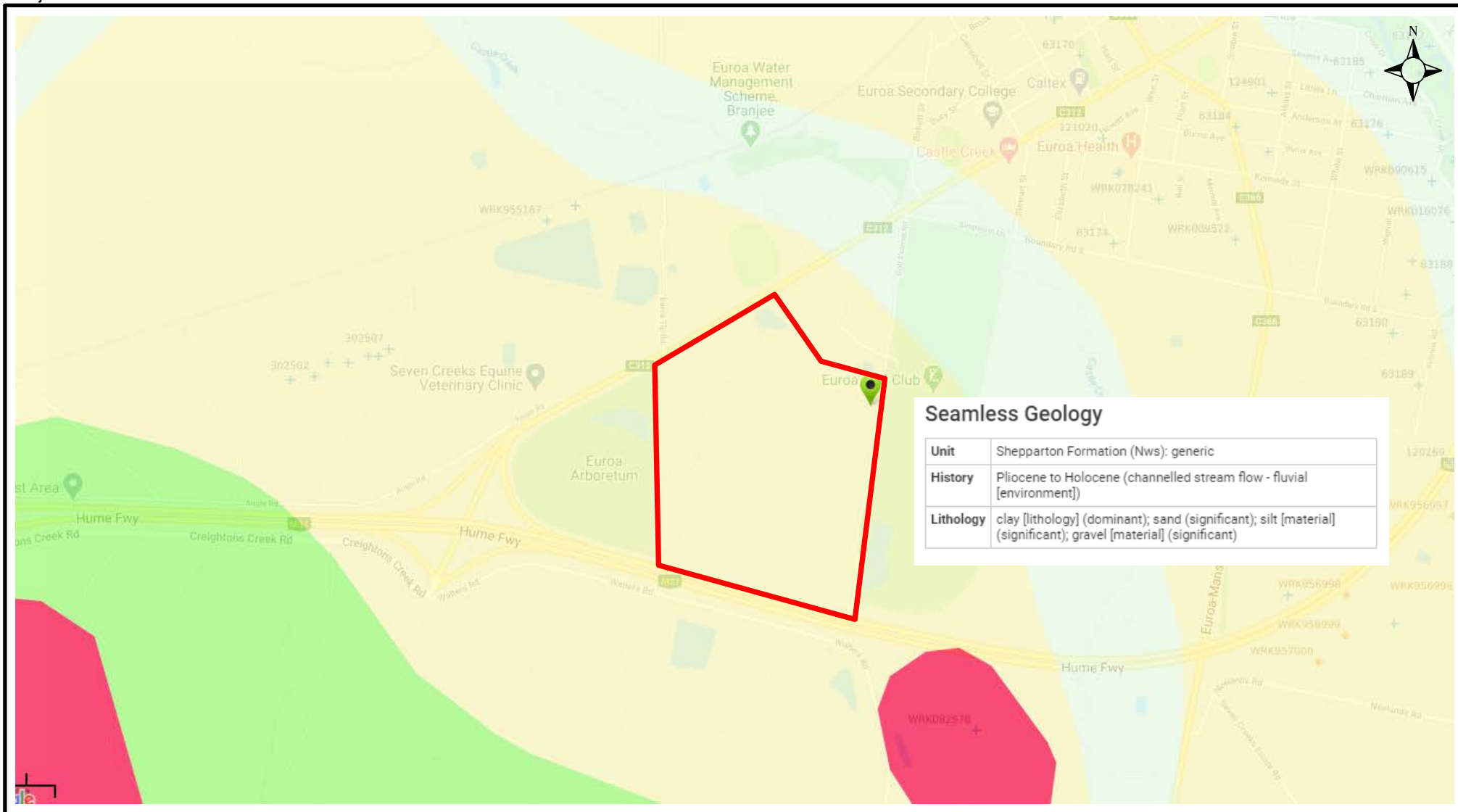
Environmental Records

Project: 1889 - Euroa



Site Geology

Project: 1889B Euroa



Groundwater Resource Report

Groundwater catchment: Goulburn - Broken

VICGRID94 Easting: 2549939 Northing: 2525664

Depth to water table: < 5m

Water table salinity (mg/L): 501 - 1000

Groundwater layers (Aquifers and Aquitards)	Depth below surface (m)	Groundwater salinity (mg/L)
QA Quaternary Aquifer sand, gravels, clay, silts	0 - 0	Unknown
UTQA Upper Tertiary / Quaternary Aquifer layered clay, sands and silt	0 - 9	501 - 1000
BSE Mesozoic and Palaeozoic Bedrock (basement) sedimentary (fractured rock): Sandstone, siltstone, mudstone, shale. Igneous (fractured rock): includes volcanics, granites, granodiorites.	9 - 209	501 - 1000

Groundwater management unit (GMU)	Depth below surface (m)	PCV (ML/yr)
STRATHBOGIE GMA	ALL	1,660

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

For further information on groundwater licensing in this area contact:
Goulburn Murray Water
Phone: 1800 013 357
Email: reception@g-mwater.com.au
Website: <http://www.g-mwater.com.au/water-resources/ground-water>

Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

Printed: 11 June 2020

Date Updated: 11 January 2019



Environment,
Land, Water
and Planning

Introduction

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

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

Purpose of this report

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

Definitions and context

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

Beneficial Use Table

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

Accessibility

If you would like to receive this publication in an alternate format, please telephone or email the DELWP Customer Service Centre 136 186, email customer.service@delwp.vic.gov.au, or via the National Relay Service on 133 677 www.relayservice.com.au.

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Disclaimer

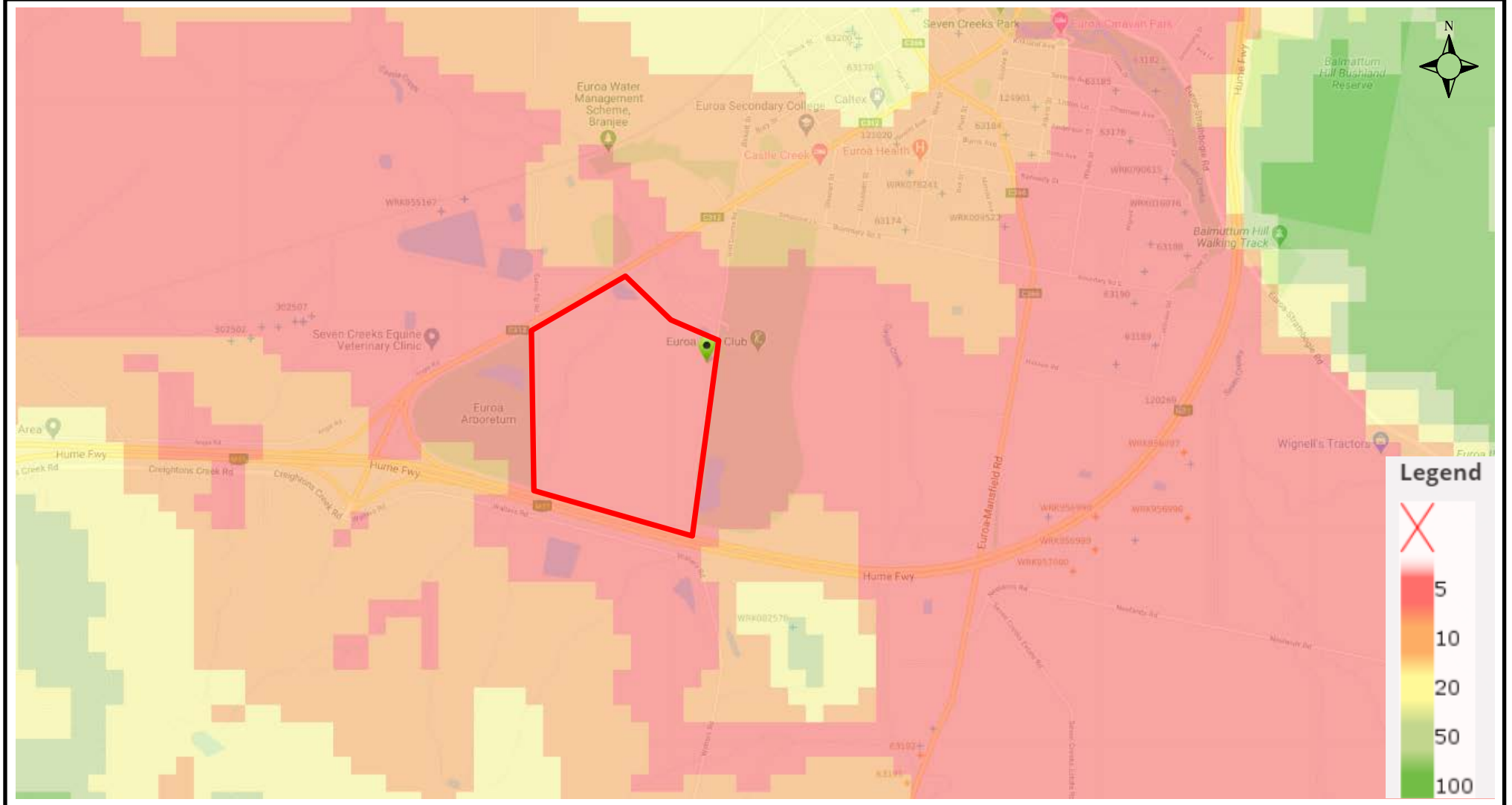
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Printed: 11 June 2020

Date Updated: 11 January 2019

Depth to Watertable Map

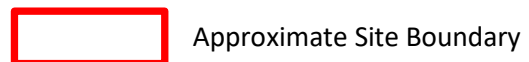
Project: 1889 - Euroa



Groundwater Salinity Map

Project: 1889 - Euroa



Project: **1889 - Euroa**

Source:	Visualising Victoria's Groundwater – vvg.org.au
Date:	Accessed 5/6/2020

PREMISES REF NO: 71893 - CONDITIONS

Premises Address: EUROA MAIN ROAD & OLD TIP ROAD RD
EUROA VIC 3666

Scheduled Categories: A03 Sewage Treatment

General Conditions

- | | |
|-------|---|
| LI_G1 | You must ensure that waste is not discharged, emitted or deposited beyond the boundaries of the premises except in accordance with this licence or under the Act. |
| LI_G2 | You must immediately notify EPA of non-compliance with any condition of this licence by calling 1300 EPA VIC (1300 372 842), sending an email to contact@epa.vic.gov.au , or using the EPA Interaction Portal. |
| LI_G3 | By 30 September each year you must submit an annual performance statement to EPA for the previous financial year in accordance with the Annual Performance Statement Guidelines (EPA Publication 1320.3, released June 2011). |
| LI_G4 | Documents and monitoring records used for preparation of the annual performance statement must be retained at the premises for five years from the date of each statement, and be able to be immediately produced upon request by an officer of the Authority. |
| LI_G5 | You must establish and implement a risk based monitoring program that enables you and EPA to determine compliance with each condition of this licence. The monitoring program must comply with the requirements of the monitoring guidelines (EPA document 1321.2, released June 2011). |

Amenity Conditions

- | | |
|-------|--|
| LI_A1 | You must ensure that odours offensive to the senses of human beings are not discharged, emitted or released beyond the boundaries of the premises. |
|-------|--|

Waste Acceptance Conditions

Licence does not have any waste acceptance conditions.

Waste Management Conditions

Licence does not have any waste management conditions.

Landfill Conditions

Licence does not have any landfill conditions.

Air Conditions

Licence does not have any discharge to air conditions.

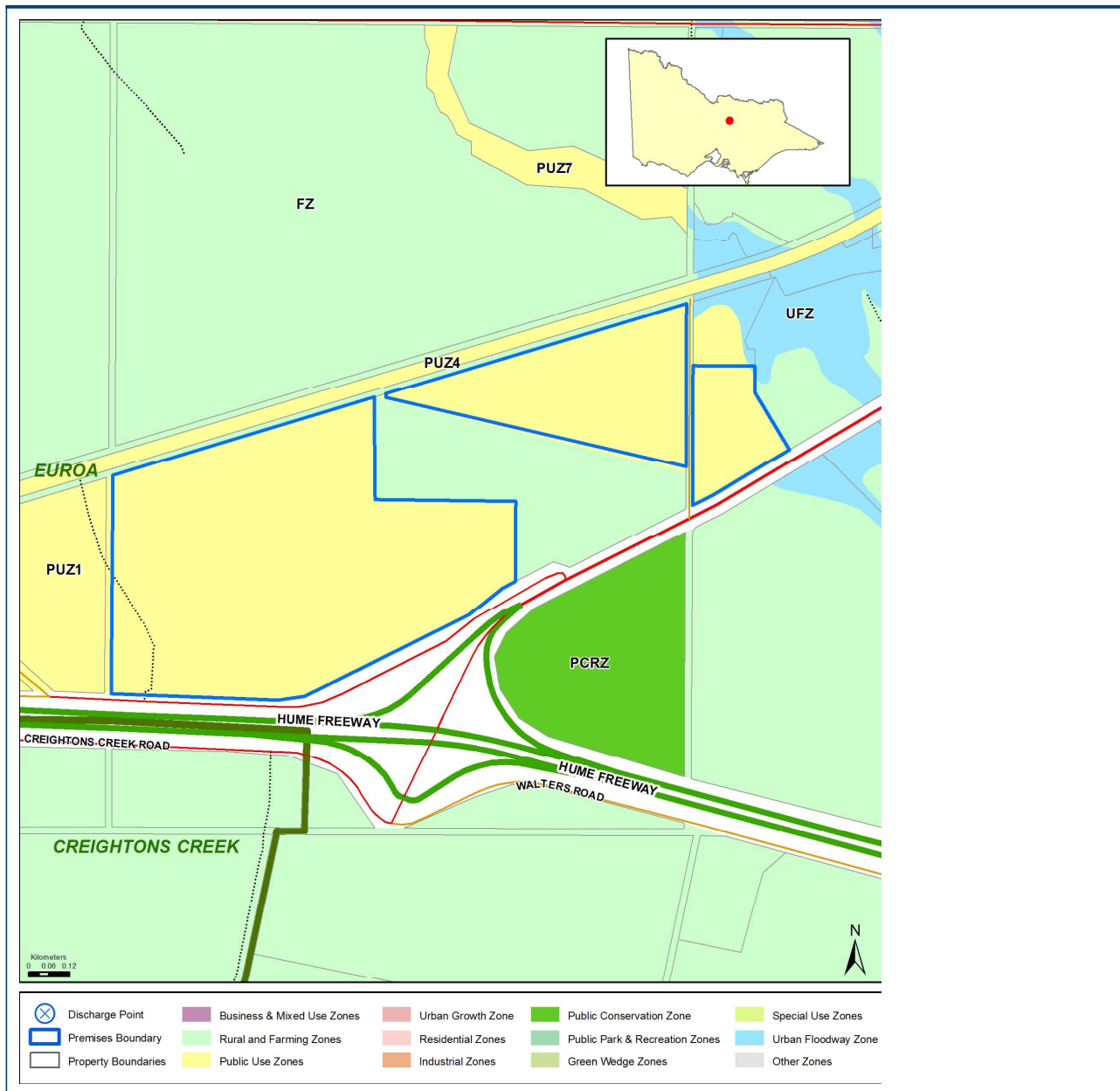
Water Conditions

- | | |
|----------|--|
| LI_DW1 | You must ensure that surface water discharged from the premises is not contaminated with waste. |
| LI_DW2.8 | Discharge of treated wastewater during wet weather conditions must be in accordance with specifications in "Discharge to Water" section of EPA Publication 1322 'Licence Management Guidelines'. |

Land Conditions

- | | |
|--------|--|
| LI_DL1 | You must not contaminate land or groundwater. |
| LI_DL2 | You must ensure that the discharge of wastewater does not change the condition of land so as to make that land or any part of that land harmful or potentially harmful to human beings or the environment. |
| LI_DL4 | You must ensure that deposit of biosolids does not change the condition of land so as to make that land or any part of that land harmful or potentially harmful to human beings or the environment. |

PREMISES REF NO: 71893 - SCHEDULE 1A - LOCALITY PLAN



Licence	73862
Company Name	GOULBURN VALLEY REGION WATER CORPORATION
ABN	84 578 076 056
Premises Address	EUROA MAIN ROAD & OLD TIP ROAD RD EUROA VIC 3666
Issued	02/10/2007
Date Amended	07/12/2017
Before relying on the information in this map, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes, and should obtain any appropriate professional advice relevant to their particular circumstances.	

PREMISES REF NO: 71893 - SCHEDULE 1B - PREMISES PLAN

EUROA WASTEWATER MANAGEMENT FACILITY



— PREMISES BOUNDARY  LICENCE SAMPLE POINT

Licence	73862
Company Name	GOULBURN VALLEY REGION WATER CORPORATION
ABN	84 578 076 056
Premises Address	EUROA MAIN ROAD & OLD TIP ROAD RD EUROA VIC 3666
Issued	02/10/2007
Date Amended	07/12/2017
Before relying on the information in this map, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes, and should obtain any appropriate professional advice relevant to their particular circumstances.	

VICTORIA LANDFILL REGISTER DATA EXTRACT

Landfill register number	10310
Reference number	Not available
Address	46 Euroa Tip Road, Euroa, VIC 3666
Extra address information	Not available
Suburb	Euroa
Council	Strathbogie Shire Council
Latitude	-36.76051
Longitude	145.55148
Landfill name	Euroa
Operating status	Closed
Waste type accepted	Putrescible waste, Solid inert waste
Estimated year of closure	1998
Estimated total waste volume	Not available
Provenance	EPA electronic records
Licence number	Not available
Historic licence number	Not available

APPENDIX C

Historical Records Review Documentation

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 1 of 10

Produced 05/06/2020 09:06 AM

Volume 9984 Folio 348

Folio Creation: Created as paper folio continued as computer folio

Parent titles :

Volume 02950 Folio 986

Volume 09115 Folio 477

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
16/08/1994	16/09/1994	T253868H	Y	TRANSFER AND LAPSING OF CAVEAT THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA
16/08/1994	16/09/1994	T253868H	Y	TRANSFER AND LAPSING OF CAVEAT R139264H
30/10/1995	03/01/1996	T936251C	Y	CAVEAT
01/09/1997	09/09/1997	U961689R	N	WITHDRAWAL OF CAVEAT T936251C
03/01/2001	09/02/2001	X239491B	Y	CREATION OF EASEMENT

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	
19/12/2001	16/04/2002	X962058E	Y	CAVEAT CAVEAT X962058E 19/12/2001 Caveator ZIGNET PTY LTD Capacity PURCHASER/FEE SIMPLE Lodged by VIC PROPERTIES Notices to VIC PROPERTIES of 29A MACEDON ROAD LOWER TEMPLESTOWE VIC 3107
14/07/2003	14/07/2003	AC195325P	Y	WITHDRAWAL OF CAVEAT CAVEAT X962058E REMOVED
25/11/2003	25/11/2003	AC496956X	Y	TRANSFER OF LAND BY ENDORSEMENT

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 2 of 10

FROM:

THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA

TO:

ROMAN ANULEWICZ

ANITA ANULEWICZ

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Joint Proprietors

ROMAN ANULEWICZ

ANITA ANULEWICZ both of 695 MOUNT WILLIAM ROAD LANCEFIELD VIC 3435

AC496956X 25/11/2003

10/02/2006	10/02/2006	AE174425L	Y
------------	------------	-----------	---

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ROMAN ANULEWICZ

ANITA ANULEWICZ

TO:

NORTHVIEW PROPERTIES PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

NORTHVIEW PROPERTIES PTY LTD of SUITE 12 79 MANNINGHAM ROAD

BULLEEN VIC 3105

AE174425L 10/02/2006

10/02/2006	10/02/2006	AE174426J	Y
------------	------------	-----------	---

MORTGAGE OF LAND

MORTGAGE AE174426J 10/02/2006

SOUTH EASTERN SECURED INVESTMENTS LTD

04/10/2006	04/10/2006	AE644284J	Y
------------	------------	-----------	---

VARIATION OF MORTGAGE

MORTGAGE AE174426J 10/02/2006

SOUTH EASTERN SECURED INVESTMENTS LTD

VARIATION OF MORTGAGE AE644284J 04/10/2006

19/03/2008	19/03/2008	AF728826X	Y
------------	------------	-----------	---

VARIATION OF MORTGAGE

MORTGAGE AE174426J 10/02/2006

SOUTH EASTERN SECURED INVESTMENTS LTD

VARIATION OF MORTGAGE AE644284J 04/10/2006

VARIATION OF MORTGAGE AF728826X 19/03/2008

14/10/2008	16/10/2008	AG137604D	Y
------------	------------	-----------	---

CAVEAT

CAVEAT AG137604D 14/10/2008

Caveator

CHOICE FINANCIAL PTY LTD

Capacity CHARGE

Date of Claim 09/10/2008

Lodged by

FIRST CHOICE CONVEYANCING

Notices to

FIRST CHOICE CONVEYANCING of LEVEL 1 317 MONTAGUE STREET ALBERT PARK VIC 3206

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 3 of 10

Date	Date	Reference	Y/N
25/06/2010	25/06/2010	AH318166K	Y

CAVEAT

CAVEAT AH318166K 25/06/2010
 Caveator
 ANDREW GOODING
 Capacity PURCHASER/FEE SIMPLE
 Lodged by
 HARRIS CARLSON LAWYERS
 Notices to
 HARRIS CARLSON LAWYERS of LEVEL 6 256 QUEEN STREET MELBOURNE VIC 3000

01/02/2011	01/02/2011	AH758719M	Y
------------	------------	-----------	---

WITHDRAWAL OF CAVEAT

CAVEAT AH318166K REMOVED

01/02/2011	01/02/2011	AH758720D	Y
------------	------------	-----------	---

WITHDRAWAL OF CAVEAT

CAVEAT AG137604D REMOVED

01/02/2011	01/02/2011	AH758721B	Y
------------	------------	-----------	---

DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)
 MORTGAGE AE174426J

01/02/2011	01/02/2011	AH758722Y	Y
------------	------------	-----------	---

TRANSFER OF LAND BY ENDORSEMENT

FROM:
 NORTHVIEW PROPERTIES PTY LTD
 TO:
 EUROA DEVELOPMENTS PTY LTD
 EUROA DEVELOPMENTS PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

EUROA DEVELOPMENTS PTY LTD of LEVEL 1 225 BRIDGE ROAD RICHMOND VIC 3121

AH758722Y 01/02/2011

01/02/2011	01/02/2011	AH758723W	Y
------------	------------	-----------	---

MORTGAGE AND CHANGE OF REGISTERED PROPRIETOR NAME

MORTGAGE AH758723W 01/02/2011

WIN SECURITIES LTD

PROPRIETORSHIP

Estate Fee Simple

Sole Proprietor

EUROA DEVELOPMENTS PTY LTD of LEVEL 1 225 BRIDGE ROAD RICHMOND VIC 3121

AH758722Y 01/02/2011

15/08/2014	15/08/2014	AL295556H	Y
------------	------------	-----------	---

MORTGAGE OF LAND

MORTGAGE AL295556H 15/08/2014

ANN FIONA SMITH

27/11/2014	27/11/2014	AL518825U (E)	N
------------	------------	---------------	---

CAVEAT

CAVEAT AL518825U 27/11/2014

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 4 of 10

Caveator
TONIA FREDIN
Grounds of Claim
MORTGAGE WITH THE FOLLOWING PARTIES AND DATE.
Parties
THE REGISTERED PROPRIETOR(S)
Date
03/11/2014
Estate or Interest
INTEREST AS MORTGAGEE
Prohibition
ABSOLUTELY
Lodged by
HAYTON, KOSKY
Notices to
TONIA FREDIN of 300 CENTRE ROAD BENTLEIGH VIC 3204

15/03/2016	15/03/2016	AM632350V	N
------------	------------	-----------	---

NOMINATE PCT TO PAPER INSTRUMENT OR LODGEMENT CASE

18/03/2016	18/03/2016	AM642901C	Y
------------	------------	-----------	---

WITHDRAWAL OF CAVEAT
CAVEAT AL518825U REMOVED

18/03/2016	18/03/2016	AM642902A	Y
------------	------------	-----------	---

DISCHARGE OF MORTGAGE
AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)
MORTGAGE AL295556H
NOMINATE PCT AM632350V

18/03/2016	18/03/2016	AM642903X	Y
------------	------------	-----------	---

MORTGAGE OF LAND
MORTGAGE AM642903X 18/03/2016
PETER MARK LEWIS

STATEMENT END

VOTS Snapshot

Volume 09984 Folio 348
124001203559M
Produced 16/04/2002 09:42 am

LAND DESCRIPTION

Lot 2 on Plan of Subdivision 300732K.
PARENT TITLES :
Volume 02950 Folio 986 Volume 09115 Folio 477
Created by instrument PS300732K 26/10/1990

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA of BINNEY

HISTORICAL SEARCH STATEMENT**Land Use Victoria**

Page 5 of 10

STREET EUROA 3666
T253868H 16/08/1994

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 PS300732K FOR FURTHER DETAILS AND BOUNDARIES

HISTORICAL REPRINT(S)

Volume 09984 Folio 348

52522249223U Page 1
Produced 16/09/1994 03:17 pm

LAND

LOT 2 on Plan of Subdivision 300732K.
PARENT TITLE(s):
Volume 02950 Folio 986 Volume 09115 Folio 477
Created by instrument PS300732K 26/10/1990

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE
SOLE PROPRIETOR
THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA; BINNEY
STREET EUROA 3666
Registered T253868H 16/08/1994

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988.

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 6 of 10

Any other encumbrances shown or entered on the plan.

SEE PS300732K FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

Volume 09984 Folio 348

63480629315L Page 1
Produced 03/01/1996 07:37 am

LAND

LOT 2 on Plan of Subdivision 300732K.

PARENT TITLE(s):

Volume 02950 Folio 986 Volume 09115 Folio 477

Created by instrument PS300732K 26/10/1990

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE

SOLE PROPRIETOR

THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA; BINNEY
STREET EUROA 3666

Registered T253868H 16/08/1994

ENCUMBRANCES, CAVEATS AND NOTICES

CAVEAT T936251C 30/10/1995

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section
24 Subdivision Act 1988.

Any other encumbrances shown or entered on the plan.

SEE PS300732K FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

Volume 09984 Folio 348

82361791674W Page 1

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 7 of 10

Produced 09/09/1997 03:26 pm

LAND

LOT 2 on Plan of Subdivision 300732K.

PARENT TITLE(s):

Volume 02950 Folio 986 Volume 09115 Folio 477

Created by instrument PS300732K 26/10/1990

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE

SOLE PROPRIETOR

THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA; BINNEY

STREET EUROA 3666

T253868H 16/08/1994

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988.

Any other encumbrances shown or entered on the plan.

SEE PS300732K FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

Volume 09984 Folio 348

120400522473C Page 1

Produced 09/02/2001 10:59 am

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 8 of 10

LAND

LOT 2 on Plan of Subdivision 300732K.

PARENT TITLE(s):

Volume 02950 Folio 986 Volume 09115 Folio 477

Created by instrument PS300732K 26/10/1990

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE

SOLE PROPRIETOR

THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF EUROA; BINNEY

STREET EUROA 3666

T253868H 16/08/1994

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988.

Any other encumbrances shown or entered on the plan.

SEE PS300732K FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

Paper Title Images

9984/348 - Version 0, Date 13/04/1999

CONTINUED AS A
COMPUTER FOLIO

ORIGINAL

**NOT TO BE TAKEN FROM THE OFFICE
OF TITLES**



REGISTER BOOK

VOL.

FOL.

9984

348

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

P-S
DATA VERIFIED

22 FEB 1992


HERBERT FREDERICK WALTERS of Euroa is the proprietor of an estate in fee simple subject to the encumbrances notified hereunder in all that land in the Parish of Branjee being Lot ② on Plan of Subdivision No. 300732K -

Issued under Section 24 of
the Subdivision Act 1988-

Derived From
Vol. 9115 Fol. 477 Vol. 2950 Fol. 986

26/10/90




Assistant Registrar of Titles

ENCUMBRANCES REFERRED TO

Any encumbrances created by Section 98 of the Transfer of Land Act 1958 or
Section 24 of the Subdivision Act 1988-

Any other encumbrances shown or entered on the said Plan-

TEXT CONVERTED



T09984-348-1-1

SEE PS300732K FOR BOUNDARIES AND OTHER DETAILS

A-N

VOL. 9984 FOL. 348

CAVEAT

CAVEATOR: THE PRESIDENT COUNCILLORS AND
RATEPAYERS OF THE SHIRE OF EUROA

CAPACITY: PURCHASER/FEE SIMPLE

LODGED BY: 1653U TEHAN GEORGE & CO. OF 35
BINNEY ST. EUROA 3666

NOTICE TO: AS ABOVE

NO: R139264H

DATE: 14/12/90



CAVEAT WILL LAPSE ON

REGISTRATION OF T253868H

16 SEP 1994



HERBERT FREDERICK WALTERS DIED ON 28/12/93

PROBATE OF HIS WILL HAS BEEN GRANTED TO
SHIRLEY BEATTIE WALTERS OF 14 KENNEDY ST.
EUROA 3666 FREDERICK ROBERT WALTERS OF
159 GISBORNE RD. MELTON 3337 &
ANTHONY HERBERT WALTERS OF 297 BRUNSWICK RD.
BRUNSWICK 3056

T97638S 19/5/94



CONTINUED AS A
COMPUTER FOLIO

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 1 of 3

Produced 26/06/2020 11:54 AM

Volume 9115 Folio 477

Folio Creation: Details Unknown

Parent title Volume 08954 Folio 093

STATEMENT END

VOTS Snapshot

NIL

Paper Title Images

9115/477 - Version 0, Date 02/09/1999

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE
OF TITLES



CANCELLED
REGISTER BOOK
VOL. 9115 FOL. 477

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

HERBERT FREDERICK WALTERS of Euroa Grazier is the --
proprietor of an estate in fee simple subject to the encumbrances --
notified hereunder in ALL THAT piece of land coloured on the ----
map hereon being Lot 2 on Plan of Subdivision No.115858 -----
Parish of Branjee County of Delatite ---

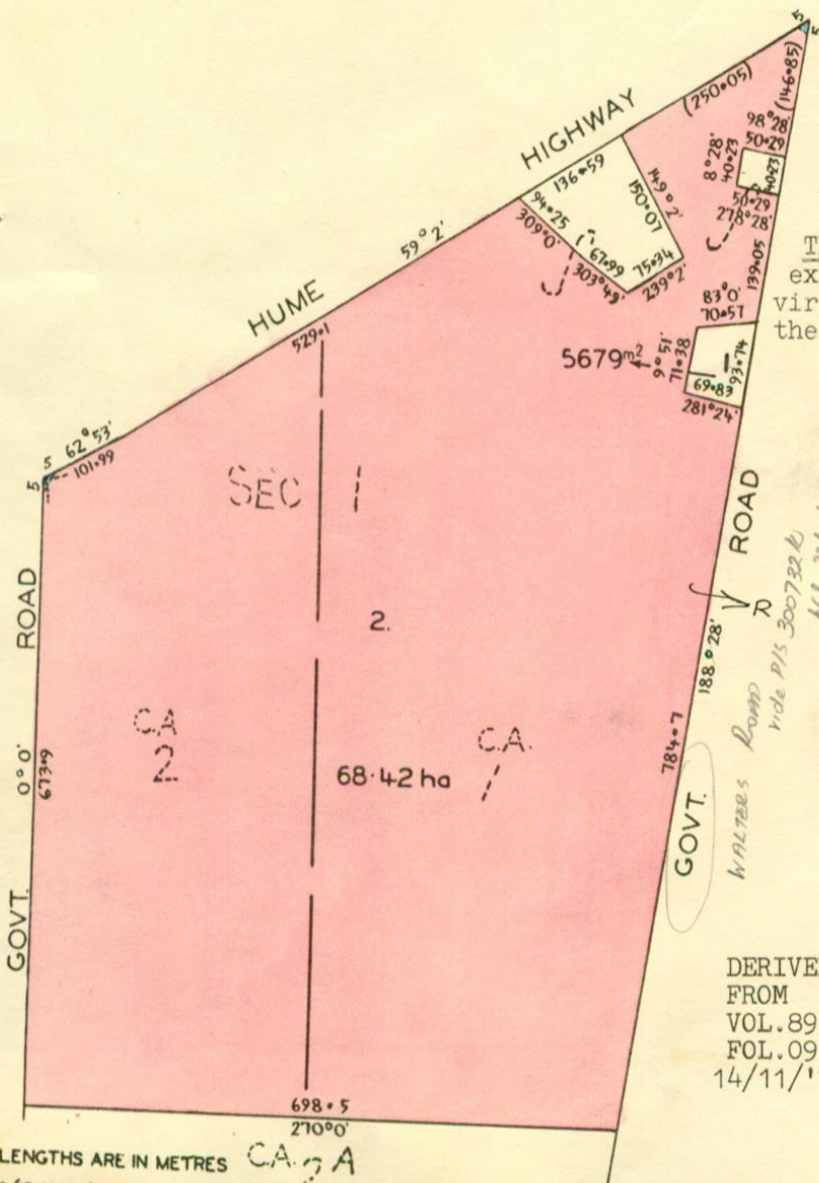
Issued under Regulation 12
on the approval of the --
above Plan of Subdivision--

[Signature]



Assistant Registrar of Titles

ENCUMBRANCES REFERRED TO



MORTGAGE A.533326--

As to any land
coloured blue--

THE EASEMENTS (if any)-
existing over the same by
virtue of Section 98 of --
the Transfer of Land Act -

THE ABOVE MORTGAGE IS DISCHARGED

26 FEB 1976



DERIVED
FROM
VOL.8954
FOL.093
14/11/'75.

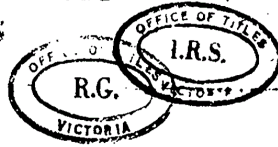
PLAN PS 300732K
AFFECTS LAND HEREIN

LENGTHS ARE IN METRES
AREAS (IF SHOWN) ARE IN HECTARES (ha)
OR IN SQUARE METRES (m²)

[Signature]

VOL. 9115 FOL. 477

CAVEAT No. E30194 LODGED 3RD MAY '71
CAVEAT WITHDRAWN 26 FEB 1976



CANCELLED

PURSUANT TO SECTION 24 SUBDIVISION
ACT 1982 ALL TITLES ISSUED AS SET

OUT HEREUNDER 26 OCT 1990

Registered
No P5305732 K

Lots one to 2 in Vol 9984 Fol 347
to Vol 9984 Fol 348

Titles not issued for Road(s) which
are vested as shown on the Plan.



CANCELLED



T09115-477-1-2

HISTORICAL SEARCH STATEMENT

Land Use Victoria

Page 1 of 7

Produced 26/06/2020 12:09 PM

Volume 2950 Folio 986

Folio Creation: Details Unknown

STATEMENT END

VOTS Snapshot

NIL

Paper Title Images

2950/986 - Version 0, Date 01/04/2000

Edward VII,

19099
20.



CANCELLED

Entered in the Register Book,
Vol. 2950 Fol. 589986

Assistant Registrar of Titles.

by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas KING Defender of the Faith Emperor of India to all to whom these presents shall come GREETING Whereas in conformity with the laws relating to the Sale and Occupation of Crown Lands in our State of Victoria the person hereinafter named has in consideration of the sum of Thirty seven pounds which sum has been duly paid to us or to our predecessor become entitled to a grant in fee simple of the land hereinafter described Now know ye that in consideration of the sum so paid and in pursuance of the laws us in that behalf enabling WE DO HEREBY GRANT unto Thomas Mallett of Moorabool Street Geelong

Gentleman

his heirs and assigns All THAT PIECE OF LAND in the said State containing thirty six acres one rood and twenty eight perches more or less being AlLOTment two A of Section one in the Parish of Branjoe County of Delatite

delineated with the measurements and abutments thereof in the map drawn in the margin of these presents and therein coloured yellow To hold unto the said Thomas Mallett

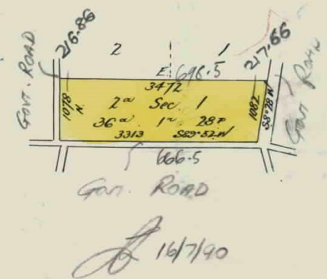
his heirs and assigns for ever EXCEPTING however unto us our heirs and successors all gold and silver and auriferous and argenteriferous earth or stone and all mines containing gold silver copper tin antimony coal lignite and all other metals and mineral ores whatsoever and all mines seams lodes or deposits containing gold silver copper tin antimony coal lignite and other metals and minerals and mineral ores in upon or under and within the boundaries of the said land AND ALSO reserving to us our heirs and successors free liberty and authority for us our heirs and successors and our and their agents and servants at any time or times hereafter to enter upon the said land and to search and mine therein for gold silver copper tin antimony coal lignite and other metals and minerals and mineral ores and to extract and remove therefrom any gold silver and any auriferous and argenteriferous earth or stone copper tin antimony coal lignite and other metals and minerals and mineral ores and to search for and work dispose of and carry away the gold silver copper tin antimony coal lignite metals minerals and their ores and the mines metals and minerals in upon and under the land hereby granted and for the purposes aforesaid to sink shafts erect machinery carry on any works and do any other things which may be necessary or usual in mining PROVIDED ALWAYS that it shall be lawful for us our heirs and successors at any time on paying full compensation to the said Thomas Mallett.

his heirs executors administrators or assigns for the full value other than that due to any metals or minerals or mineral ores being thereon or thereunder of the said piece of land or so much thereof as may be resumed as hereinafter mentioned and of the improvements upon the said piece of land or the part so resumed such value in case of disagreement to be ascertained by arbitration to resume the said piece of land or any part thereof for mining purposes AND THAT the terms conditions and events upon which such land may be resumed and the manner in which such arbitration may be conducted may be determined by regulations in such manner as the Governor in Council may from time to time direct or if at any time no such regulations shall be in force then by the regulations concerning the resumption of land for mining purposes in force at the date of this Grant unless Parliament shall otherwise determine.

Dated the thirteenth day of May in the year of our Lord One thousand nine hundred and three being the day the person herein named became entitled to this Grant.

In testimony whereof we have caused this our Grant to be sealed at Melbourne with the Seal of the said State.

Witness our trusty and well-beloved Sir GEORGE SYDENHAM CLARKE, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Governor in and over the said State of Victoria and its Dependencies.



NOTE: The bearings and measurements are approximately given in this plan.
The measurements are in links.



T02950-986-1-5

G. S. Clarke




20
24
56

ORIGINAL CROWN GRANT.
Not to be dealt with outside the Titles Office.

PLAN X/Ps 300 732 K
AFFECTS LAND HEREIN

MEMORIALS OF INSTRUMENTS.

Nature of Instrument.	Time of its Production for Registration.	Names of the Parties to it.	Number or Symbol thereon.
<p><i>WED</i></p> <p>James Theophilus Mallett of Shakhbogie Creek farmer is now the ^{day of} proprietor of the within-described Estate and Land by Transfer from the ¹⁵ named ^{at} Thomas Mallett registered 3rd August 1906 at 3 o'clock in the After noon, and Numbered 530377</p> <p><i>W. Byrne</i> Assistant-Registrar of Titles.</p>			
<p><i>Al</i></p> <p>James Edward Atkinson of Euroa Farmer is now the proprietor of the within-described estate pursuant to a transfer from James Theophilus Mallett registered on the 25th day of January 1918 and numbered 844308</p> <p><i>W. B. Barney</i> Assistant Registrar of Titles.</p>			
<p><i>Re</i></p> <p>Charles Ernest Forster of Euroa Farmer is now the proprietor of the within-described estate pursuant to a transfer from James Edward Atkinson registered on the 15th day of March 1918 and numbered 844941</p> <p><i>C. Watson</i> Assistant Registrar of Titles.</p>			
<p>CAVEAT No 71823 LODGED 11th March 1927</p> <p>CAVEAT No 71823 LAPSED 7th April 1932/4</p> <p>Victor James Walters of Euroa Grazier is now the proprietor of the within described estate by transfer registered on 5th March 1932 and numbered 1497429</p> <p><i>P. S. A. Thomas</i> Assistant Registrar of Titles</p>		<p>MORTGAGE to The Bank of Australasia registered on 21 August 1946 numbered 860345</p> <p><i>W. P. Fitzgerald</i> Assistant Registrar of Titles</p> <p>28 OCT 1953</p>	
<p><i>W. H. Sinclair</i></p> <p>MORTGAGE to The Bank of Australasia registered on 11th September 1944 numbered 722189</p> <p><i>W. H. Sinclair</i> Assistant Registrar of Titles</p>		<p>DISCHARGED 28 FEB 1978</p> <p>OFFICE OF TITLES P.E. VICTORIA</p> <p>Australia and New Zealand Bank Limited registered 28 OCT 1953 numbered 1061747</p> <p><i>W. H. Sinclair</i> Assistant Registrar of Titles</p>	
<p>Herbert Frederick Walkers of Euroa Grazier is now the proprietor of the within described estate by transfer registered on 11th September 1944 numbered 1927669</p> <p><i>W. H. Sinclair</i> Assistant Registrar of Titles</p>		<p>CAVEAT No. E30 194 LODGED 3 May 1971</p> <p>CAVEAT WITHDRAWN 26 FEB 1976</p> <p>OFFICE OF TITLES R.G. VICTORIA</p> <p>OFFICE OF TITLES V.W. VICTORIA</p>	
		<p>ROAD CONSTRUCTION AUTHORITY</p> <p>has pursuant to section 57 of Transfer of Land Act served a Notification relating to the compulsory acquisition of land comprised herein.</p> <p>Dated 26 NOV 1986</p> <p>Entered 14 APR 1986</p> <p>No. MS818205 (Plan with letter)</p> <p>OFFICE OF TITLES P.D.P. VICTORIA</p>	
		<p>ENDORSEMENTS CONTINUE ON AN EXTENDED SHEET COMMENCING WITH P134922</p> <p>OFFICE OF TITLES K.P. VICTORIA</p>	

 Natural Resources and Environment
AGRICULTURE • RESOURCES • CONSERVATION • AND MANAGEMENT

**INTENTIONALLY
BLACK**

This is the Sheet marked **A** referred to in the Certificate of Title entered in the Register Book Vol. **2950** Fol. **986**

Assistant Registrar of Titles.



TRANSFER AS TO PART Na P134922^V
registered 17 APR 1989
CANCELLED AS TO PART
See Vol. **9976** Fol. **068**
area 4.373 ha



CANCELLED

AS TO Balance.

PURSUANT TO SECTION 24 SUBDIVISION
ACT 1988 AND TITLES ISSUED AS SET
OUT HEREUNDER

Registered 26 OCT 1990
No **05200732K**

Lots one to 2 in Vol 9984 Fol 347
to Vol 9984 Fol 348

Titles not issued for Road(s) which
are vested as shown on the Plan.



CANCELLED



T02950-986-3-1

Historical Aerial Photography - 1973

Project: 1889 - Euroa



Approximate Site Boundary

Source:	LANDATA.vic.gov.au
Project:	Hume Highway Avenal-Benalla
Run:	3
Scale:	1:15000
Date:	12/1973

Historical Aerial Photography - 1987

Project: 1889 - Euroa



Approximate Site Boundary

Source:	LANDATA.vic.gov.au
Project:	Nelson-Cape Paterson Coast
Run:	8
Scale:	1:25000
Date:	12/1987

Aerial Photography - 2011

Project: 1889 - Euroa



Approximate Site Boundary

Source:	Google Earth
Date:	Taken 1/1/2011
Date:	Accessed 5/6/2020

Aerial Photography - 2015

Project: 1889 - Euroa



Approximate Site Boundary

Source:	Google Earth
Date:	Taken 1/9/2015
Date:	Accessed 5/6/2020

APPENDIX D

Site Photographs



1. Small pile of hard waste - wood and fencing wire



2. North-west corner facing east



3. North-west corner facing south



4. Central-west dam



5. South-west corner facing north



6. South-west corner facing east



7. South-east corner facing west



8. South-east corner facing north



9. GS01 Sample location - typical of silt across majority of site



10. Pile of hard waste - wood and fencing wire



11. Northern dam



12. GS19 Sample location - typical of fill material found in north-east section of site



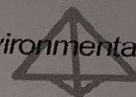
13. Stockyard in north-east corner of site (T2 Sample location)

APPENDIX E

Soil Investigation Documents

Sample Master List

Atma Environmental



Project Ref.: 1889
Date: 18/6/20 Sheet No. 1 of 1

Location: Euro
Site Co-ordinator: AC

NOTE: Duplicate & Split samples collected each 20 soil/water samples. Trip, Field and Rinsate blanks = 1 per day. Collect background sample upgradient of site.

	Sample No.	COC check	OVA	Composite	Dupes/Splits/Rinsates/Special Tests/Comments
1/36	GS01		0		DUP180620A, SPLIT180620A
2/37	GS02		0		
3/38	GS03		0		
4/39	GS04		0		
5/40	GS05		0		
6/41	GS06		0		
7/42	GS07		0		
8/43	GS08		0		
9/44	GS09		0		
10/45	GS10		0		
11/46	GS11		0		
12/47	GS12		0		
13/48	GS13		0		
14/49	GS14		0		
15/50	GS15		0		
16/51	GS16		0		
17/52	GS17		0		
18/53	GS18		0		
19/54	GS19		0		
20/55	GS20		0		
21/56	GS21		0		
22/57	GS22 T1		0		DUP180620B, SPLIT180620B
23/58	GS23 72		0.7		
24/59	B				
25/60					
26/61					
27/62					
28/63					
29/64					
30/65					
31/66					
32/67					
33/68					
34/69					

Soil Sample Descriptions



Project: 1889 Euroa
Location: 72 Golf Course Road, Euroa
Date: 18/6/2020

Sampler Initials: AC
Method: Shovel
Page No.: 1 of 1

Sample ID	Depth (m)	Soil Description	PID
GS01	0.1	Natural, Sandy SILT, dark brown, medium grain size, loose consistency, damp	0
GS02	0.1	"	0
GS03	0.1	"	0
GS04	0.1	"	0
GS05	0.1	"	0
GS06	0.1	"	0
GS07	0.1	"	0
GS08	0.1	"	0
GS09	0.1	"	0
GS10	0.1	"	0
GS11	0.1	"	0
GS12	0.1	"	0
GS13	0.1	"	0
GS14	0.1	Natural, Sandy SILT, dark brown, medium grain size, loose consistency, dry	0
GS15	0.1	"	0
GS16	0.1	Natural, Sandy SILT, dark brown, medium grain size, loose consistency, moist (waterlogged)	0
GS17	0.1	"	0
GS18	0.1	"	0
GS19	0.1	Fill, Sandy CLAY, brown, low plasticity, firm consistency, dry	0
GS20	0.1	Disturbed Natural, Sandy SILT, dark brown, medium grain size, loose consistency, moist (waterlogged)	0
GS21	0.1	"	0
T01	0.1	Fill, Sandy CLAY, brown, low plasticity, firm consistency, dry	0
T02	0.1	Fill, Sandy CLAY, brown, low plasticity, firm consistency, dry	0.70

APPENDIX F

Laboratory Reports and COC Documents

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet **1** of **2**

Atma Environmental

PROJECT: **Euroa**

Sampler's

Signature: **AC**

Sampler's

Name: **Allan Campbell**

Site No: **1889**

DATE: **18/6/20**

Time: **1400**

SAMPLE NO.	SAMPLE MATRIX:						ANALYSIS FOR:										NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
	DISCRETE	COMPOSITE	GRAB	SOIL	WATER	BLANK /	R20 NEPA Screen	R1 TRH/BTEXN	M17 Metals	DGP3	pH (CaCl2)	CEC	HOLD						
G501	x			x					x	x							1		
G502	x			x					x	x	x						1		
G503	x			x					x	x							1		
G504	x			x					x	x	x						1		
G505	x			x					x	x							1		
G506	x			x					x	x	x						1		
G507	x			x					x	x							1		
G508	x			x			x	x			x	x					1		
G509	x			x					x	x							1		
G510	x			x					x	x	x						1		
G511	x			x					x	x							1		
G512	x			x					x	x	x						1		
G513	x			x					x	x							1		
G514	x			x					x	x	x						1		
G515	x			x					x	x							1		
G516	x			x					x	x							1		
G517	x			x					x	x	x						1		
G518	x			x					x	x							1		
G519	x			x			x	x			x	x					1		
G520	x			x			x	x									1		
G521	x			x					x	x							1		
T1	x			x									x				1		
T2	x			x					x	x	x						1		
NUM180620A	x			x					x	x							1		
TRIP180620	x			x								x					4		
TOTAL:							3	3	1	1	10	2	3				23		

DISPATCHED BY: (sign)

(DATE/TIME)

△ **Allan Campbell** **AC**

RECEIVED BY: (sign)

20 20

CANTH 20

(DATE/TIME)

ICE 19/6/20 2-7 -2:19pm

COURIERED BY: (sign)

(DATE/TIME)

663

LAB NAME:

Furshins

Courier

726730

IW

INITIAL RESULTS REQUESTED WITHIN:

24Hrs

48Hrs

3 - 4 DAYS

NORMAL

REMARKS:

Please email completed COC, Sample Receipt Notification, results and invoices to:

Please email results to:

gberry@atmaenvironmental.com

kebrien@atmaenvironmental.com

rmcphillips@atmaenvironmental.com

hextor@atmaenvironmental.com

jhammett@atmaenvironmental.com

acampbell@atmaenvironmental.com

*12 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn

NOTE: △ Must be completed by Atma Environmental

■ Must be completed with date and time by laboratory.

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 2 of 2

Atma Environmental

PROJECT:

Euroa

Sampler's

Signature:

Sampler's

Name:

Allan Campbell

Site No:

1889

DATE:

18/6/20

Time:

1400

SAMPLE NO.

SAMPLE
MATRIX:

ANALYSIS
FOR:

COMPOSITING
INSTRUCTIONS:

DISCRETE

COMPOSITE

GRAB

SOIL

WATER

BLANK /

Hold

NO. of CONTAINERS

HIGH CONTAM EXPECTED

FIELD 180620

X

X

X

X

4

DECON 180620

X

X

X

X

4

DUP 180620 B

X

X

X

X

TOTAL:

2

2

2

8

DISPATCHED BY: (sign)

(DATE/TIME)

RECEIVED BY: (sign)

(DATE/TIME)

△

Allan Campbell

ll

Canva To

19/6/20-219pm

COURIERED BY: (sign)

(DATE/TIME)

663

LAB NAME:

Euroa

726730
IW

INITIAL RESULTS REQUESTED WITHIN:

24 Hr

48 Hr

3 Day

NORMAL

REMARKS:

Please email completed COC, Sample Receipt Notification, results and invoices to:

Please email results to:

gberry@atmaenvironmental.com

mcp@atmaenvironmental.com

acampbell@atmaenvironmental.com

NOTE:

△ Must be completed by Atma Environmental

■ Must be completed with date and time by laboratory.

Melbourne

6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney

Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane

1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth

2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521

e.mail : EnviroSales@eurofins.com

web : www.eurofins.com.au

Sample Receipt Advice

Company name: **Atma Environmental**
Contact name: **Glenn Berry**
Project name: **EUROA**
Project ID: **1889**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Jun 19, 2020 2:19 PM**
Eurofins reference: **726730**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 2.7 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☒ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.

Contact notes N/A Custody Seals intact (if used).

If you have any questions with respect to these samples please contact:

Savini Suduweli on Phone : or by e.mail: SaviniSuduweli@eurofins.com

Results will be delivered electronically via e.mail to Glenn Berry - gberry@atmaenvironmental.com.

Atma Environmental
56 William St
Abbotsford
VIC 3067



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Glenn Berry**

Report **726730-S**
 Project name **EUROA**
 Project ID **1889**
 Received Date **Jun 19, 2020**

Client Sample ID			GS01	GS02	GS03	GS04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33622	M20-Jn33623	M20-Jn33624	M20-Jn33625
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	76	99	101	147
Tetrachloro-m-xylene (surr.)	1	%	50	53	68	107
Heavy Metals						
Arsenic	2	mg/kg	3.6	2.8	2.2	5.8
Barium	10	mg/kg	16	20	16	18
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	5.8	5.6	6.3	7.5
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5

Client Sample ID			GS01	GS02	GS03	GS04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33622	M20-Jn33623	M20-Jn33624	M20-Jn33625
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	33	18	12	14
Manganese	5	mg/kg	41	20	48	32
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	6.7	5.9	6.5	7.4
% Moisture	1	%	20	18	19	17
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	4.3	-	4.1

Client Sample ID			GS05	GS06	GS07	GS08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33626	M20-Jn33627	M20-Jn33628	M20-Jn33629
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Toxaphene	1	mg/kg	< 1	< 1	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorodate (surr.)	1	%	115	131	115	-
Tetrachloro-m-xylene (surr.)	1	%	80	87	84	-
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			GS05	GS06	GS07	GS08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33626	M20-Jn33627	M20-Jn33628	M20-Jn33629
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.6	3.1	4.2	4.4
Barium	10	mg/kg	14	20	56	-
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.0	7.0	11	8.5
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	11	11	17	9.9
Manganese	5	mg/kg	26	28	94	53
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	-
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tin	10	mg/kg	< 10	< 10	< 10	-
Zinc	5	mg/kg	6.7	6.3	13	6.6
% Moisture	1	%	19	20	23	11
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	4.0	-	4.4
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	-	900
Cyanide (free)	5	mg/kg	-	-	-	< 5
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	77
TRH C10-C36 (Total)	50	mg/kg	-	-	-	77
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	75
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	100

Client Sample ID			GS05	GS06	GS07	GS08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33626	M20-Jn33627	M20-Jn33628	M20-Jn33629
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	118
p-Terphenyl-d14 (surr.)	1	%	-	-	-	110
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchloroendate (surr.)	1	%	-	-	-	97
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	135
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	-	< 0.5
2,4-D	0.5	mg/kg	-	-	-	< 0.5
2,4,5-T	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	97

Client Sample ID			GS05	GS06	GS07	GS08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33626	M20-Jn33627	M20-Jn33628	M20-Jn33629
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Mirex	0.01	mg/kg	-	-	-	< 0.01
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchloroendate (surr.)	1	%	-	-	-	97
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	135
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	136
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	1.6

Client Sample ID			GS09	GS10	GS11	GS12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33630	M20-Jn33631	M20-Jn33632	M20-Jn33633
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			GS09	GS10	GS11	GS12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33630	M20-Jn33631	M20-Jn33632	M20-Jn33633
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	83	94	75	80
Tetrachloro-m-xylene (surr.)	1	%	55	105	58	57
Heavy Metals						
Arsenic	2	mg/kg	3.6	< 2	2.7	2.7
Barium	10	mg/kg	19	12	20	16
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	6.3	< 5	8.3	6.5
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	8.5	5.7	9.7	7.6
Manganese	5	mg/kg	78	97	88	42
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	7.7	12	8.4	5.5
% Moisture	1	%	20	37	27	15
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	4.2	-	4.2

Client Sample ID			GS13	GS14	GS15	GS16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33634	M20-Jn33635	M20-Jn33636	M20-Jn33637
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			GS13	GS14	GS15	GS16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33634	M20-Jn33635	M20-Jn33636	M20-Jn33637
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	72	87	100	105
Tetrachloro-m-xylene (surr.)	1	%	50	63	75	59
Heavy Metals						
Arsenic	2	mg/kg	3.1	5.4	2.2	3.5
Barium	10	mg/kg	19	29	16	22
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.3	8.0	< 5	6.6
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	11	15	5.8	12
Manganese	5	mg/kg	30	52	91	29
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	7.4	9.2	5.2	6.3
% Moisture	1	%	20	17	6.8	23
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	3.9	-	-

Client Sample ID			GS17	GS18	GS19	GS20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33638	M20-Jn33639	M20-Jn33640	M20-Jn33641
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchloroendate (surr.)	1	%	56	72	-	-
Tetrachloro-m-xylene (surr.)	1	%	62	61	-	-
Bifenthrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Heavy Metals						
Arsenic	2	mg/kg	3.2	2.3	2.3	6.6
Barium	10	mg/kg	18	28	-	-
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.2	7.3	5.7	20
Cobalt	5	mg/kg	< 5	< 5	< 5	5.4
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	10	24	7.7	17
Manganese	5	mg/kg	29	57	37	200
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	-	-
Nickel	5	mg/kg	< 5	< 5	< 5	7.2
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	-
Tin	10	mg/kg	< 10	< 10	-	-
Zinc	5	mg/kg	5.4	22	6.3	13

Client Sample ID			GS17	GS18	GS19	GS20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33638	M20-Jn33639	M20-Jn33640	M20-Jn33641
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
% Moisture	1	%	20	31	6.9	20
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	4.2	-	4.2	-
Chromium (hexavalent)	1	mg/kg	-	-	< 1	< 1
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	230	-
Cyanide (free)	5	mg/kg	-	-	< 5	< 5
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	< 50	< 50
TRH C29-C36	50	mg/kg	-	-	57	88
TRH C10-C36 (Total)	50	mg/kg	-	-	57	88
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	77	75
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			GS17 Soil M20-Jn33638 Jun 18, 2020	GS18 Soil M20-Jn33639 Jun 18, 2020	GS19 Soil M20-Jn33640 Jun 18, 2020	GS20 Soil M20-Jn33641 Jun 18, 2020
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
2-Fluorobiphenyl (surr.)	1	%	-	-	59	87
p-Terphenyl-d14 (surr.)	1	%	-	-	66	68
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	-	-	94	56
Tetrachloro-m-xylene (surr.)	1	%	-	-	97	55
Triazines						
Atrazine	0.2	mg/kg	-	-	< 0.2	< 0.2
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	< 0.5	< 0.5
2,4-D	0.5	mg/kg	-	-	< 0.5	< 0.5
2,4,5-T	0.5	mg/kg	-	-	< 0.5	< 0.5
MCPA	0.5	mg/kg	-	-	< 0.5	< 0.5
MCPB	0.5	mg/kg	-	-	< 0.5	< 0.5
Mecoprop	0.5	mg/kg	-	-	< 0.5	< 0.5
Warfarin (surr.)	1	%	-	-	87	92
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Mirex	0.01	mg/kg	-	-	< 0.01	< 0.01
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	-	< 1	< 1
Dibutylchloredate (surr.)	1	%	-	-	94	56
Tetrachloro-m-xylene (surr.)	1	%	-	-	97	55
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	-	44	31

Client Sample ID			GS17	GS18	GS19	GS20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33638	M20-Jn33639	M20-Jn33640	M20-Jn33641
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit				
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	1.7	-

Client Sample ID			GS21	T2	DUP180620A
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33642	M20-Jn33643	M20-Jn33644
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	71	87	86
Tetrachloro-m-xylene (surr.)	1	%	53	54	51
Heavy Metals					
Arsenic	2	mg/kg	4.9	3.5	3.5
Barium	10	mg/kg	32	26	17
Beryllium	2	mg/kg	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	6.6	5.9
Cobalt	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5
Lead	5	mg/kg	20	8.5	7.9
Manganese	5	mg/kg	67	92	42
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5

Client Sample ID			GS21	T2	DUP180620A
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Jn33642	M20-Jn33643	M20-Jn33644
Date Sampled			Jun 18, 2020	Jun 18, 2020	Jun 18, 2020
Test/Reference	LOR	Unit			
Heavy Metals					
Nickel	5	mg/kg	5.2	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10
Zinc	5	mg/kg	12	28	7.6
% Moisture	1	%	17	6.9	25
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	4.8	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Organochlorine Pesticides	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
VIC EPA Metals : Metals M17	Melbourne	Jun 22, 2020	180 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Jun 22, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding Methyl Mercury/PBDE			
NEPM 2013 Metals : Metals M12	Melbourne	Jun 22, 2020	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
Heavy Metals	Melbourne	Jun 22, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Chromium (hexavalent)	Melbourne	Jun 22, 2020	28 Days
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Cyanide (free)	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organophosphorus Pesticides	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Polychlorinated Biphenyls	Melbourne	Jun 22, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Triazines	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
NEPM 2013 Acid Herbicides	Melbourne	Jun 22, 2020	14 Days
- Method: MGT 530			
NEPM 2013 Organochlorine Pesticides	Melbourne	Jun 22, 2020	14 Days
- Method: USEPA 8081 Organochlorine Pesticides			
NEPM 2013 Phenols	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Melbourne	Jun 19, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Jun 22, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Jun 25, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
Eurofins mgt Suite B1			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 22, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			

Company Name: Atma Environmental
Address: 56 William St
Abbotsford
VIC 3067

Project Name: EUROA
Project ID: 1889

Order No.:
Report #: 726730
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 19, 2020 2:19 PM
Due: Jun 26, 2020
Priority: 5 Day
Contact Name: Glenn Berry

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD	pH (units) (1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins mgt Suite B1
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
1	GS01	Jun 18, 2020	2:00PM	Soil	M20-Jn33622			X	X	X			
2	GS02	Jun 18, 2020	2:00PM	Soil	M20-Jn33623		X	X	X	X			
3	GS03	Jun 18, 2020		Soil	M20-Jn33624			X	X	X			
4	GS04	Jun 18, 2020		Soil	M20-Jn33625		X	X	X	X			
5	GS05	Jun 18, 2020		Soil	M20-Jn33626			X	X	X			
6	GS06	Jun 18, 2020		Soil	M20-Jn33627		X	X	X	X			
7	GS07	Jun 18, 2020		Soil	M20-Jn33628			X	X	X			
8	GS08	Jun 18, 2020		Soil	M20-Jn33629		X			X	X	X	X
9	GS09	Jun 18, 2020		Soil	M20-Jn33630			X	X	X			
10	GS10	Jun 18, 2020		Soil	M20-Jn33631		X	X	X	X			

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6 Monterey Road
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NATA # 1261
Site # 1254 & 14271

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
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Company Name: Atma Environmental
Address: 56 William St
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VIC 3067

Project Name: EUROA
Project ID: 1889

Order No.:
Report #: 726730
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 19, 2020 2:19 PM
Due: Jun 26, 2020
Priority: 5 Day
Contact Name: Glenn Berry

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD	pH (units) (1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins mgt Suite B1
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
11	GS11	Jun 18, 2020		Soil	M20-Jn33632			X	X	X			
12	GS12	Jun 18, 2020		Soil	M20-Jn33633		X	X	X	X			
13	GS13	Jun 18, 2020		Soil	M20-Jn33634			X	X	X			
14	GS14	Jun 18, 2020		Soil	M20-Jn33635		X	X	X	X			
15	GS15	Jun 18, 2020		Soil	M20-Jn33636			X	X	X			
16	GS16	Jun 18, 2020		Soil	M20-Jn33637			X	X	X			
17	GS17	Jun 18, 2020		Soil	M20-Jn33638		X	X	X	X			
18	GS18	Jun 18, 2020		Soil	M20-Jn33639			X	X	X			
19	GS19	Jun 18, 2020		Soil	M20-Jn33640		X			X	X	X	X
20	GS20	Jun 18, 2020		Soil	M20-Jn33641					X		X	X
21	GS21	Jun 18, 2020		Soil	M20-Jn33642			X	X	X			
22	T2	Jun 18, 2020		Soil	M20-Jn33643		X	X	X	X			
23	DUP180620A	Jun 18, 2020		Soil	M20-Jn33644			X	X	X			

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Company Name: Atma Environmental
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Sample Detail						HOLD	pH (units) (1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins mgt Suite B1
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
24	T1	Jun 18, 2020		Soil	M20-Jn33645	X							
25	TRIP180620	Jun 18, 2020		Water	M20-Jn33646	X							
26	FIELD180620	Jun 18, 2020		Water	M20-Jn33647	X							
27	DECON180620	Jun 18, 2020		Water	M20-Jn33648	X							
28	DUP180620B	Jun 18, 2020		Soil	M20-Jn33649	X							
Test Counts						5	10	20	20	23	2	3	3

Internal Quality Control Review and Glossary

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NC	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Bifenthrin	mg/kg	< 0.05			0.05	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Selenium	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Silver	mg/kg	< 0.2			0.2	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Triazines							
Atrazine	mg/kg	< 0.2			0.2	Pass	
Method Blank							
NEPM 2013 Acid Herbicides							
Picloram	mg/kg	< 0.5			0.5	Pass	
2,4-D	mg/kg	< 0.5			0.5	Pass	
2,4,5-T	mg/kg	< 0.5			0.5	Pass	
MCPA	mg/kg	< 0.5			0.5	Pass	
MCPB	mg/kg	< 0.5			0.5	Pass	
Mecoprop	mg/kg	< 0.5			0.5	Pass	
Method Blank							
NEPM 2013 Organochlorine Pesticides							
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Mirex	mg/kg	< 0.01			0.01	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
NEPM 2013 Phenols							
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	123			70-130	Pass	
4,4'-DDD	%	106			70-130	Pass	
4,4'-DDE	%	106			70-130	Pass	
4,4'-DDT	%	90			70-130	Pass	
a-BHC	%	99			70-130	Pass	
Aldrin	%	107			70-130	Pass	
b-BHC	%	103			70-130	Pass	
d-BHC	%	83			70-130	Pass	
Dieldrin	%	70			70-130	Pass	
Endosulfan I	%	118			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	77			70-130	Pass	
Endrin	%	95			70-130	Pass	
Endrin aldehyde	%	88			70-130	Pass	
Endrin ketone	%	74			70-130	Pass	
g-BHC (Lindane)	%	108			70-130	Pass	
Heptachlor	%	71			70-130	Pass	
Heptachlor epoxide	%	113			70-130	Pass	
Hexachlorobenzene	%	104			70-130	Pass	
Methoxychlor	%	84			70-130	Pass	
Bifenthrin	%	83			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	108			80-120	Pass	
Arsenic	%	107			80-120	Pass	
Barium	%	111			80-120	Pass	
Beryllium	%	101			80-120	Pass	
Beryllium	%	102			80-120	Pass	
Boron	%	92			80-120	Pass	
Boron	%	91			80-120	Pass	
Cadmium	%	107			80-120	Pass	
Cadmium	%	105			80-120	Pass	
Chromium	%	115			80-120	Pass	
Chromium	%	114			80-120	Pass	
Cobalt	%	120			80-120	Pass	
Cobalt	%	119			80-120	Pass	
Copper	%	111			80-120	Pass	
Copper	%	110			80-120	Pass	
Lead	%	113			80-120	Pass	
Lead	%	112			80-120	Pass	
Manganese	%	114			80-120	Pass	
Manganese	%	115			80-120	Pass	
Mercury	%	106			75-125	Pass	
Mercury	%	102			75-125	Pass	
Molybdenum	%	110			80-120	Pass	
Nickel	%	107			80-120	Pass	
Nickel	%	107			80-120	Pass	
Selenium	%	98			80-120	Pass	
Selenium	%	103			80-120	Pass	
Silver	%	109			80-120	Pass	
Tin	%	109			80-120	Pass	
Zinc	%	107			80-120	Pass	
Zinc	%	107			80-120	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	121			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	112			70-130	Pass	
TRH C10-C14	%	120			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	96			70-130	Pass	
Toluene	%	126			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	115			70-130	Pass	
Xylenes - Total*	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	122			70-130	Pass	
TRH C6-C10	%	96			70-130	Pass	
TRH >C10-C16	%	115			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	90			70-130	Pass	
Acenaphthylene	%	89			70-130	Pass	
Anthracene	%	70			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	75			70-130	Pass	
Benzo(b&j)fluoranthene	%	70			70-130	Pass	
Benzo(g,h,i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	103			70-130	Pass	
Chrysene	%	86			70-130	Pass	
Dibenz(a,h)anthracene	%	83			70-130	Pass	
Fluoranthene	%	83			70-130	Pass	
Fluorene	%	78			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	83			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
Phenanthrene	%	88			70-130	Pass	
Pyrene	%	81			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	107			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Acid Herbicides							
Picloram	%	93			70-130	Pass	
2,4-D	%	89			70-130	Pass	
2,4,5-T	%	82			70-130	Pass	
MCPA	%	81			70-130	Pass	
MCPB	%	83			70-130	Pass	
Mecoprop	%	88			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Organochlorine Pesticides							
Endosulfan sulphate	%	80			70-130	Pass	
Mirex	%	91			70-130	Pass	
4,4'-DDD	%	86			70-130	Pass	
4,4'-DDE	%	101			70-130	Pass	
Aldrin	%	90			70-130	Pass	
Chlordanes - Total	%	81			70-130	Pass	
Dieldrin	%	84			70-130	Pass	
Endosulfan I	%	97			70-130	Pass	
Endosulfan II	%	81			70-130	Pass	
Endrin	%	71			70-130	Pass	
Heptachlor	%	74			70-130	Pass	
Hexachlorobenzene	%	91			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Phenols							
2-Methylphenol (o-Cresol)	%	78			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	74			30-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol			%	36			30-130	Pass	
Phenol			%	71			30-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Jn33623	CP	%	117			70-130	Pass	
4,4'-DDD	M20-Jn33623	CP	%	106			70-130	Pass	
4,4'-DDE	M20-Jn33623	CP	%	125			70-130	Pass	
a-BHC	M20-Jn33623	CP	%	81			70-130	Pass	
Aldrin	M20-Jn33623	CP	%	126			70-130	Pass	
b-BHC	M20-Jn33623	CP	%	80			70-130	Pass	
d-BHC	M20-Jn33623	CP	%	86			70-130	Pass	
Dieldrin	M20-Jn33623	CP	%	124			70-130	Pass	
Endosulfan I	M20-Jn33623	CP	%	122			70-130	Pass	
Endosulfan II	M20-Jn33623	CP	%	117			70-130	Pass	
Endosulfan sulphate	M20-Jn33623	CP	%	82			70-130	Pass	
Endrin	M20-Jn33623	CP	%	111			70-130	Pass	
Endrin aldehyde	M20-Jn33623	CP	%	73			70-130	Pass	
Endrin ketone	M20-Jn33623	CP	%	113			70-130	Pass	
g-BHC (Lindane)	M20-Jn33623	CP	%	77			70-130	Pass	
Heptachlor	M20-Jn33623	CP	%	71			70-130	Pass	
Heptachlor epoxide	M20-Jn33623	CP	%	83			70-130	Pass	
Hexachlorobenzene	M20-Jn33623	CP	%	96			70-130	Pass	
Bifenthrin	M20-Jn33623	CP	%	96			70-130	Pass	
Spike - % Recovery									
NEPM 2013 Organochlorine Pesticides				Result 1					
Mirex	M20-Jn33623	CP	%	127			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M20-Jn33993	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Jn33782	NCP	%	92			70-130	Pass	
TRH C10-C14	M20-Jn33994	NCP	%	95			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Jn33782	NCP	%	103			70-130	Pass	
Toluene	M20-Jn33782	NCP	%	88			70-130	Pass	
Ethylbenzene	M20-Jn33782	NCP	%	71			70-130	Pass	
m&p-Xylenes	M20-Jn33782	NCP	%	73			70-130	Pass	
o-Xylene	M20-Jn33782	NCP	%	81			70-130	Pass	
Xylenes - Total*	M20-Jn33782	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Jn33782	NCP	%	81			70-130	Pass	
TRH C6-C10	M20-Jn33782	NCP	%	79			70-130	Pass	
TRH >C10-C16	M20-Jn33994	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M20-Jn33901	NCP	%	105			70-130	Pass	
Acenaphthylene	M20-Jn33901	NCP	%	104			70-130	Pass	
Anthracene	M20-Jn33901	NCP	%	90			70-130	Pass	
Benz(a)anthracene	M20-Jn33901	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	M20-Jn33901	NCP	%	121			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	M20-Jn33901	NCP	%	112		70-130	Pass	
Benzo(g,h,i)perylene	M20-Jn33901	NCP	%	75		70-130	Pass	
Benzo(k)fluoranthene	M20-Jn33901	NCP	%	89		70-130	Pass	
Chrysene	M20-Jn33901	NCP	%	100		70-130	Pass	
Dibenz(a,h)anthracene	M20-Jn33901	NCP	%	76		70-130	Pass	
Fluoranthene	M20-Jn33901	NCP	%	90		70-130	Pass	
Fluorene	M20-Jn33901	NCP	%	112		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M20-Jn33901	NCP	%	90		70-130	Pass	
Naphthalene	M20-Jn33901	NCP	%	116		70-130	Pass	
Phenanthrene	M20-Jn33901	NCP	%	119		70-130	Pass	
Pyrene	M20-Jn33901	NCP	%	94		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1016	M20-Jn33904	NCP	%	78		70-130	Pass	
Aroclor-1260	M20-Jn33904	NCP	%	82		70-130	Pass	
Spike - % Recovery								
NEPM 2013 Acid Herbicides				Result 1				
Picloram	M20-Jn31079	NCP	%	91		70-130	Pass	
2,4-D	M20-Jn31079	NCP	%	93		70-130	Pass	
MCPA	M20-Jn31079	NCP	%	101		70-130	Pass	
MCPB	M20-Jn31079	NCP	%	82		70-130	Pass	
Spike - % Recovery								
NEPM 2013 Phenols				Result 1				
2-Methylphenol (o-Cresol)	M20-Jn33901	NCP	%	78		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Jn33901	NCP	%	101		30-130	Pass	
Pentachlorophenol	M20-Jn33901	NCP	%	86		30-130	Pass	
Phenol	M20-Jn33901	NCP	%	108		30-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M20-Jn33632	CP	%	87		75-125	Pass	
Barium	M20-Jn33632	CP	%	88		75-125	Pass	
Beryllium	M20-Jn33632	CP	%	82		75-125	Pass	
Boron	M20-Jn33632	CP	%	73		75-125	Fail	Q08
Cadmium	M20-Jn33632	CP	%	106		75-125	Pass	
Chromium	M20-Jn33632	CP	%	94		75-125	Pass	
Cobalt	M20-Jn33632	CP	%	97		75-125	Pass	
Copper	M20-Jn33632	CP	%	90		75-125	Pass	
Lead	M20-Jn33632	CP	%	93		75-125	Pass	
Manganese	M20-Jn33632	CP	%	63		75-125	Fail	Q08
Mercury	M20-Jn33632	CP	%	107		70-130	Pass	
Molybdenum	M20-Jn33632	CP	%	89		75-125	Pass	
Nickel	M20-Jn33632	CP	%	88		75-125	Pass	
Selenium	M20-Jn33632	CP	%	81		75-125	Pass	
Silver	M20-Jn33632	CP	%	107		75-125	Pass	
Tin	M20-Jn33632	CP	%	90		75-125	Pass	
Zinc	M20-Jn33632	CP	%	85		75-125	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M20-Jn33634	CP	%	108		70-130	Pass	
4,4'-DDD	M20-Jn33634	CP	%	113		70-130	Pass	
4,4'-DDE	M20-Jn33634	CP	%	107		70-130	Pass	
4,4'-DDT	M20-Jn33634	CP	%	91		70-130	Pass	
a-BHC	M20-Jn33634	CP	%	101		70-130	Pass	
Aldrin	M20-Jn33634	CP	%	93		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-BHC	M20-Jn33634	CP	%	88			70-130	Pass	
d-BHC	M20-Jn33634	CP	%	73			70-130	Pass	
Dieldrin	M20-Jn33634	CP	%	100			70-130	Pass	
Endosulfan I	M20-Jn33634	CP	%	91			70-130	Pass	
Endosulfan II	M20-Jn33634	CP	%	111			70-130	Pass	
Endosulfan sulphate	M20-Jn33634	CP	%	104			70-130	Pass	
Endrin	M20-Jn33634	CP	%	97			70-130	Pass	
Endrin aldehyde	M20-Jn33634	CP	%	92			70-130	Pass	
Endrin ketone	M20-Jn33634	CP	%	83			70-130	Pass	
g-BHC (Lindane)	M20-Jn33634	CP	%	96			70-130	Pass	
Heptachlor	M20-Jn33634	CP	%	73			70-130	Pass	
Heptachlor epoxide	M20-Jn33634	CP	%	85			70-130	Pass	
Hexachlorobenzene	M20-Jn33634	CP	%	79			70-130	Pass	
Methoxychlor	M20-Jn33634	CP	%	81			70-130	Pass	
Bifenthrin	M20-Jn33634	CP	%	81			70-130	Pass	
Spike - % Recovery									
NEPM 2013 Organochlorine Pesticides				Result 1					
Mirex	M20-Jn33634	CP	%	96			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Jn33622	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bifenthrin	M20-Jn33622	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&i)fluoranthene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Fluoranthene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Chlorpyrifos	M20-Jn33622	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Triazines				Result 1	Result 2	RPD		
Atrazine	M20-Jn33622	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD		
Mirex	M20-Jn33622	CP	mg/kg	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
NEPM 2013 Phenols				Result 1	Result 2	RPD		
2-Methylphenol (o-Cresol)	M20-Jn33622	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M20-Jn33622	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Pentachlorophenol	M20-Jn33622	CP	mg/kg	< 1	< 1	<1	30%	Pass
Phenol	M20-Jn33622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M20-Jn33629	CP	mg/kg	< 1	< 1	<1	30%	Pass
Conductivity (1:5 aqueous extract at 25°C as rec.)	M20-Jn35969	NCP	uS/cm	60	60	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M20-Jn33785	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	M20-Jn33993	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M20-Jn33993	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M20-Jn33993	NCP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	M20-Jn33785	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M20-Jn33785	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M20-Jn33785	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M20-Jn33785	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M20-Jn33785	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total*	M20-Jn33785	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M20-Jn33785	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M20-Jn33785	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	M20-Jn33993	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M20-Jn33993	NCP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M20-Jn33993	NCP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
NEPM 2013 Acid Herbicides				Result 1	Result 2	RPD		
Picloram	M20-Jn33465	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-D	M20-Jn33465	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-T	M20-Jn33465	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
MCPA	M20-Jn33465	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
MCPB	M20-Jn33465	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Mecoprop	M20-Jn33465	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Cation Exchange Capacity				Result 1	Result 2	RPD		
Cation Exchange Capacity	B20-Jn31431	NCP	meq/100g	16	16	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M20-Jn33631	CP	mg/kg	< 2	< 2	<1	30%	Pass
Barium	M20-Jn33631	CP	mg/kg	12	13	4.0	30%	Pass
Beryllium	M20-Jn33631	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M20-Jn33631	CP	mg/kg	< 10	< 10	<1	30%	Pass
Cadmium	M20-Jn33631	CP	mg/kg	0.5	0.5	7.0	30%	Pass
Chromium	M20-Jn33631	CP	mg/kg	< 5	< 5	<1	30%	Pass
Cobalt	M20-Jn33631	CP	mg/kg	< 5	< 5	<1	30%	Pass
Copper	M20-Jn33631	CP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	M20-Jn33631	CP	mg/kg	5.7	5.4	5.0	30%	Pass
Manganese	M20-Jn33631	CP	mg/kg	97	97	<1	30%	Pass
Mercury	M20-Jn33631	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M20-Jn33631	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M20-Jn33631	CP	mg/kg	< 5	< 5	<1	30%	Pass
Selenium	M20-Jn33631	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M20-Jn33631	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tin	M20-Jn33631	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M20-Jn33631	CP	mg/kg	12	13	12	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M20-Jn33631	CP	%	37	37	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M20-Jn33632	CP	mg/kg	2.7	2.7	2.0	30%	Pass
Barium	M20-Jn33632	CP	mg/kg	20	20	2.0	30%	Pass
Beryllium	M20-Jn33632	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M20-Jn33632	CP	mg/kg	< 10	< 10	<1	30%	Pass
Cadmium	M20-Jn33632	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M20-Jn33632	CP	mg/kg	8.3	8.3	1.0	30%	Pass
Cobalt	M20-Jn33632	CP	mg/kg	< 5	< 5	<1	30%	Pass
Copper	M20-Jn33632	CP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	M20-Jn33632	CP	mg/kg	9.7	9.1	6.0	30%	Pass
Manganese	M20-Jn33632	CP	mg/kg	88	89	<1	30%	Pass
Mercury	M20-Jn33632	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M20-Jn33632	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M20-Jn33632	CP	mg/kg	< 5	< 5	<1	30%	Pass
Selenium	M20-Jn33632	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M20-Jn33632	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tin	M20-Jn33632	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M20-Jn33632	CP	mg/kg	8.4	9.9	16	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M20-Jn33633	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Endosulfan II	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bifenthrin	M20-Jn33633	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Chlorpyrifos	M20-Jn33633	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Triazines				Result 1	Result 2	RPD		
Atrazine	M20-Jn33633	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD		
Mirex	M20-Jn33633	CP	mg/kg	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
NEPM 2013 Phenols				Result 1	Result 2	RPD		
2-Methylphenol (o-Cresol)	M20-Jn33633	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M20-Jn33633	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Pentachlorophenol	M20-Jn33633	CP	mg/kg	< 1	< 1	<1	30%	Pass
Phenol	M20-Jn33633	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M20-Jn33641	CP	%	20	20	2.0	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Savini Suduweli	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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(modified after US EPA chain of custody form)

Atma Environmental



Time: 1400

Telephone : + 61-3-8549 9600

acampbell@atmaenvironmental.com

Must be completed with date and time by laboratory.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EM2010820

<p>Client : ATMA ENVIRONMENTAL P/L</p> <p>Contact : MR GLEN BERRY</p> <p>Address : 56 William Street ABBOTSFORD VIC, AUSTRALIA 3067</p> <p>E-mail : gberry@atmaenvironmental.com</p> <p>Telephone : +61 94296955</p> <p>Facsimile : +61 94295911</p> <p>Project : Euroa</p> <p>Order number : ----</p> <p>C-O-C number : ----</p> <p>Site : 1889</p> <p>Sampler : ALLEN CAMPBELL</p>	<p>Laboratory : Environmental Division Melbourne</p> <p>Contact : Customer Services EM</p> <p>Address : 4 Westall Rd Springvale VIC Australia 3171</p> <p>E-mail : ALSEnviro.Melbourne@alsglobal.com</p> <p>Telephone : +61-3-8549 9600</p> <p>Facsimile : +61-3-8549 9626</p> <p>Page : 1 of 2</p> <p>Quote number : EM2015ATMENV0001 (EN/333 Seconday work only)</p> <p>QC Level : NEPM 2013 B3 & ALS QC Standard</p>
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Dates

Date Samples Received : 24-Jun-2020 15:50	Issue Date : 25-Jun-2020
Client Requested Due : 01-Jul-2020	Scheduled Reporting Date : 01-Jul-2020
Date	

Delivery Details

Mode of Delivery : Carrier	Security Seal : Not Available
No. of coolers/boxes : 1	Temperature : 13.4°C
Receipt Detail :	No. of samples received / analysed : 2 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Sample(s) received in non-ALS container(s).**
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EP068A (solids) Organochlorine Pesticides by GCMS	SOIL - S-03 15 Metals (NEPM 2013 Suite - incl. Digestion)
EM2010820-001	18-Jun-2020 00:00	SPLIT180620A		✓	✓	✓
EM2010820-002	18-Jun-2020 00:00	SPLIT180620B	✓			

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALLEN CAMPBELL

- *AU Certificate of Analysis - NATA (COA)	Email	acampbell@atmaenvironmental.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	acampbell@atmaenvironmental.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	acampbell@atmaenvironmental.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	acampbell@atmaenvironmental.com
- A4 - AU Tax Invoice (INV)	Email	acampbell@atmaenvironmental.com
- Chain of Custody (CoC) (COC)	Email	acampbell@atmaenvironmental.com
- EDI Format - ENMRG (ENMRG)	Email	acampbell@atmaenvironmental.com
- EDI Format - ESDAT (ESDAT)	Email	acampbell@atmaenvironmental.com

GLEN BERRY

- *AU Certificate of Analysis - NATA (COA)	Email	gberry@atmaenvironmental.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	gberry@atmaenvironmental.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	gberry@atmaenvironmental.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	gberry@atmaenvironmental.com
- A4 - AU Tax Invoice (INV)	Email	gberry@atmaenvironmental.com
- Chain of Custody (CoC) (COC)	Email	gberry@atmaenvironmental.com
- EDI Format - ENMRG (ENMRG)	Email	gberry@atmaenvironmental.com
- EDI Format - ESDAT (ESDAT)	Email	gberry@atmaenvironmental.com

CERTIFICATE OF ANALYSIS

Work Order : **EM2010820**
Client : **ATMA ENVIRONMENTAL P/L**
Contact : **MR GLEN BERRY**
Address : **56 William Street**
ABBOTSFORD VIC, AUSTRALIA 3067
Telephone : **+61 94296955**
Project : **Euroa**
Order number : **----**
C-O-C number : **----**
Sampler : **ALLEN CAMPBELL**
Site : **1889**
Quote number : **EN/333 Seconday work only**
No. of samples received : **2**
No. of samples analysed : **1**

Page : **1 of 5**
Laboratory : **Environmental Division Melbourne**
Contact : **Customer Services EM**
Address : **4 Westall Rd Springvale VIC Australia 3171**
Telephone : **+61-3-8549 9600**
Date Samples Received : **24-Jun-2020 15:50**
Date Analysis Commenced : **29-Jun-2020**
Issue Date : **01-Jul-2020 16:43**



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SPLIT180620A	----	----	----	----
Client sampling date / time				18-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010820-001	-----	-----	-----	-----
Result				----	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	26.0	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	----	----	----	----
Barium	7440-39-3	10	mg/kg	20	----	----	----	----
Beryllium	7440-41-7	1	mg/kg	<1	----	----	----	----
Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	7	----	----	----	----
Cobalt	7440-48-4	2	mg/kg	<2	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	13	----	----	----	----
Manganese	7439-96-5	5	mg/kg	39	----	----	----	----
Nickel	7440-02-0	2	mg/kg	3	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
Vanadium	7440-62-2	5	mg/kg	33	----	----	----	----
Zinc	7440-66-6	5	mg/kg	6	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SPLIT180620A	----	----	----	----
				Client sampling date / time	18-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2010820-001	-----	-----	-----	-----
				Result	----	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg		<0.05	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		94.4	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		74.6	----	----	----	----

Page : 5 of 5
Work Order : EM2010820
Client : ATMA ENVIRONMENTAL P/L
Project : Euroa



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	38	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	33	139