Cardno LanePiper

Shaping the Future

Limited Environmental Site Assessment

1505 - 1525 Pound Road, Clyde North

Ref no: 213157

Prepared for DFC (Project Management) Pty Ltd

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LIMITED ENVIRONMENTAL SITE ASSESSMENT

1505 - 1525 Pound Road, Clyde North

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LIST OF ABBREVIATIONS AND UNITS

Chemical Names

BTEX	Benzene, Toluene, Ethylbenzene & Xylenes (subset of MAH)
CHC	Chlorinated Hydrocarbons
MAH	Monocyclic Aromatic Hydrocarbons
OCP	OrganoChlorine Pesticides
OPP	OrganoPhosphate Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	PolyChlorinated Biphenyls
PHC	Petroleum Hydrocarbons
SVOC	Semi-Volatile Organic Compounds
TDS	Total Dissolved Solids (salinity of water)
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons (= TPH)
VOC	Volatile Organic Compounds
VHC	Volatile Halogenated Compounds

Technical Terms

AGL	Above Ground Level
AHD	Australian Height Datum
AMG	Australian Map Grid
ANZECC	Australian and New Zealand Environment and Conservation Council
AST	Aboveground Storage Tank
BDL	Below Detection Limit
BGL	Below Ground Level
COC	Chain of Custody
CoEA	Certificate of Environmental Audit
CoPC	Chemicals of Potential Concern
EILs	Environmental Investigation Levels
EPA	Environmental Protection Authority
ESA	Environmental Site Assessment
GCMS	Gas Chromatograph - Mass Spectrometer
GDB	Groundwater Database (Department of Natural Resources and Environment)
GME	Groundwater Monitoring Event
HILs	Health Investigation Levels

LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of Reporting
N/A	Not Applicable
NAPL	Non-Aqueous Phase Liquid
NEPM	National Environmental Protection Measure
PID	Photo-ionisation detector (measures in ppm)
PQL	Practical Quantitation Limit
PSH	Phase Separated Hydrocarbon
QA	Quality Assurance
QC	Quality Control
RL	Reduced Level
RPD	Relative Percentage Difference
SoEA	Statement of Environmental Audit
TIT	Triple Interceptor Trap
UCL	Upper confidence Limit ("95% UCL of the mean" is a value for the mean concentration from sampling which has only a 5% chance of being greater than the true mean value.)
UST	Underground Storage Tank

Units

Ha	Hectares
mbgl	Metres Below Ground Level
mg/kg	Milligram per Kilogram (approximately equivalent to ppm)
mg/L	Milligram per Litre
mTOC	Metres below Top of Casing
ppb	Part per Billion
ppm	Parts per Million
µg/kg	Microgram per Kilogram (approximately equivalent to ppb)
µg/L	Microgram per Litre
µS/cm	Micro Siemens per Centimetre (Electrical Conductivity - Water)

LIMITED ENVIRONMENTAL SITE ASSESSMENT

1505 - 1525 Pound Road, Clyde North

1 INTRODUCTION

1.1 Background

Cardno Lane Piper was engaged by DFC (Project Management) Pty Ltd ("the Client"), to conduct a Limited Environmental Site Assessment (Limited ESA or the Assessment) at 1505 - 1525 Pound Road, Clyde North. The location and features of the site are shown on Figures 1 and 2 presented in Appendix A.

The Phase 1 searches and site inspection were carried out in accordance with the scope and limitations presented in Cardno Lane Piper's proposal of 17 May 2013 (Our Ref: 213157Proposal01.1), accepted 22 May 2013. The phase 1 assessment commenced following approval of the proposed works by the client 22 May 2013. Findings from the site inspection conducted as part of the phase 1 assessment led to an increase in the scope of works to include a limited soil investigation that was approved by the client on 4 June 2013.

The site is proposed to be developed for low to medium density residential housing with public open space, a state primary school and a community centre.

1.2 Purpose & Objectives

Cardno Lane Piper understands that:

- The Client (the site owner) proposes to develop the site as a residential subdivision.
- The assessment is required for due diligence purposes and to provide a preliminary assessment of potential contamination liabilities.

The specific objectives of the assessment, subject to the limitations stated in Section 1.5 are:

1. Identify the potential for past or current activities at the site (and in the immediate surrounds) to cause contamination of land or groundwater at the site.
2. Assess the potential for the protected beneficial uses of land and groundwater to be impacted due to potential contamination.
3. Based on the nature of former and current land uses and site activities, determine the nature of further works (if any) which may be required in accordance with DSE *Potentially Contamination Land General Practice Note* (2005).

1.3 Scope of Assessment

Cardno Lane Piper carried out the following tasks in order to satisfy the purpose and objectives of this assessment.

Defined the Site, Features & Surrounds:

1. Obtained the property title description from a Land-data Property Report.

- Defined the site boundaries based on title information and established a site base plan.
- Identified the site features including main buildings, services and other infrastructure.

- Defined the topography, surface water drainage of the site and its proximity to the nearest surface water body and any associated potentially sensitive aquatic ecosystems
- Identified the location of nearby sensitive environments and receptors such as residential, child-care and primary schools, wetlands or streams.
- Identified the zoning of the site under the local Planning Scheme.

Hydrogeology & Groundwater Resource Use

Reviewed the regional and local hydrogeology to identify likely site soil type(s), aquifers, likely groundwater occurrence, expected flow direction, quality and resource value.

Ascertained the actual utilisation of groundwater at (and in the vicinity of) the site through a search of the Victorian Groundwater Database at Department of Sustainability and Environment (DSE) website.

Review of Public Records on Site History

7. Publicly available documents relevant to the site (to the extent readily available):

- Historical Chain of land titles
- Historical and current maps of the area

8. Public registers provided below to identified any sites (this and nearby sites):

- Priority (Contaminated) Site Register
- Statements and Certificates of Environmental Audit (Contaminated Land) SoEA/CoEA.
- Energy Safe Australia register to identify any cathodic protection systems on the site potentially associated with underground fuel storage tanks (USTs).

9. Selected historical aerial photos available from the DSE archive (and obtained copies).

Site Inspection & Surrounds

10. Checked that the “site” conforms to that shown on title plans.
11. Confirmed the site features and identified any visible evidence of fuel storage tanks (above or below ground) and other infrastructure with potential to cause contamination of soil and/or groundwater.
12. Checked for evidence of soil type and evidence of site cutting and filling or subsidence or placement of solid wastes.
13. Assessed the surrounding area (to a radius of about 200 m and to the extent possible) for potential sources of contamination of soil or groundwater at the site.

Interviews

14. Conducted interviews with current site owner familiar with the history and operations of the site for anecdotal information relevant to the assessment (to the extent possible).

Non-Intrusive Site Investigations

15. Surveyed the site using an underground service locator.

Intrusive Site Investigation Sampling & Testing

16. Implemented a comprehensive Sampling and Analysis Plan including laboratory analysis of field quality control (QC) samples.
17. Performed intrusive investigation of soil conditions at the site by drilling and sampling at locations and by methods set out in the following sections of this report, including the investigation of soil and fill
18. Tested selected soil samples for a broad range of analytes (by a NATA accredited laboratory).

Reporting

Prepared this report to document the investigation activities, results as well as provide findings and recommendations relevant to the objectives of the assessment.

1.4 Assessment Timeline

The key milestones achieved during this assessment are summarised in Table 1-1

Table 1-1: Site Assessment Timeline

Date	Activity/Milestone
22 May 2013	Cardno Lane Piper Engaged by the Client
3 June 2013	Site Inspection
12 June 2013	Soil sampling field work
1 July 2013	Issued final report to the Client

1.5 Standard of Assessment & Limitations

This assessment has been undertaken in general accordance with the current "industry standards" for an ESA for the purpose and objectives and scope identified in this report. These standards are set out in:

- *National Environment Protection [Assessment of Site Contamination] Measure* (NEPM), December 1999, National Environment Protection Council (NEPC).
- AS4482.1- 2005: *Guide to the sampling and investigation of potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds*. Standards Australia (2005).

The agreed scope of this assessment has been limited for the current purposes of the client. The assessment may not identify contamination occurring in all areas of the site, or occurring after sampling was conducted. Subsurface conditions may vary considerably away from the sample locations where information has been obtained.

This assessment report is not any of the following:

- An Environmental Audit Report as defined under the *Environment Protection Act* 1970.
- A Detailed ESA or Environmental Site Investigations sufficient for an Environmental Auditor to be able to conclude a statutory Environmental Audit.
- A geotechnical report and the bore logs or test pit logs may not be sufficient as the basis for geotechnical advice.
- A detailed hydrogeological assessment in conformance with EPA Publication 668 *Hydrogeological Assessment (Groundwater Quality) Guidelines,* September 2006.
- An assessment of groundwater contaminants potentially arising from other sites or sources nearby.
- A total assessment of the site to determine suitability of the entire parcel of land at the site for one or more of the beneficial uses of land set out in *State Environmental Protection Policy (Prevention and Management of Contamination of Land)*.

An overview of environmental site assessments is included in Appendix I.

2 SITE DESCRIPTION & SETTING

2.1 Site Definition and Description

Table 2-1 summarises the key details defining the site. The location of the site is shown on Figure 1, Appendix A.

Table 2-1: Site Identification Details

Site Address	1505 - 1525 Pound Road, Clyde North
Site Area	Approximately 48.42 ha
Title Details	Lot 2 PS 327975
Municipality	Casey
Current Site Owner	Nancye Gearon
Planning Zone	Urban Growth Zone
Planning Overlay	None

2.2 Proposed Development

The site is proposed to be developed for low to medium density residential housing with public open space, a state primary school and a community centre.

2.3 Geographic Setting

The site is relatively flat with no significant topographical features.

The surface water over most of the site is expected to drain naturally to the south west towards Cardinia Creek located approximately 3km to the south west.

On a regional scale, drainage is expected to be to the south towards Western Port Bay approximately 17km south.

2.4 Site Use & Infrastructure

The site comprises several grassed paddocks, a house and several sheds. One farm dam and several cattle watering troughs are also located within the site. The site also contains infrastructure suggesting the existence of a windmill and a water pump contained in a brick structure.

The dwelling and associated sheds are located towards the centre of the site with frontage to Pound Road. Burnt remains of one shed were also visible at the site.

Current infrastructures include:

- Single storey brick veneer house
- Brick garage (separate to the house)
- Sheds - locked, currently used for storage of miscellaneous household items.

- A cattle yard
- Open shed – used to store hay, food
- Remnants of a shed – demolished and burnt
- Closed well
- Two underground septic tanks
- Farm dam
- Remnants of a wind mill and pump house

The site features can be seen on Figure 2, Appendix A and photographs are presented in Appendix E.

2.5 Surrounding Land Uses

The surrounding land uses, nearby potential sources of contamination and sensitive receptors are outlined in Table 2-2.

Table 2-2: Surrounding Land Uses

Direction	Land Use or Activity
North	• Overhead electricity transmission lines • Livestock grazing, large open grassed paddocks
West	• Pound Road • Livestock grazing large open grassed paddocks with a dam and residential house • Residential developments past Truckers Road • Clyde Creek approximately 2.2km
East	• Livestock grazing, large open grassed paddocks • Cardinia Creek located approximately 3km
South	• Livestock grazing, large open grassed paddocks

2.6 Hydrogeology

The following interpretation of the hydrogeology of the site in its regional setting is based on a desktop study as no investigation of groundwater was included in this assessment.

2.6.1 Geology & Aquifers

The geology of the site and its regional setting has been ascertained from the Department of Primary Industries Earth Resources GeoVic website and the Groundwater Resources Report (Appendix H).

The principal aquifer(s) at this site include:

- Upper Tertiary Aquifer: A sedimentary fluvial aquifer consisting of sand, gravel and clay.
- Baxter Sandstone Aquifer: consisting of Mesozoic and Palaeozoic aged bedrock and sedimentary (fractured rock) consisting of sandstone, siltstone, mudstone, shale and Igneous rock (includes volcanics, granites, granodiorites).

2.6.2 Groundwater Flow Systems

Groundwater occurrence and flow at this site is not defined due to the lack of intrusive investigation. The following is inferred from interpretation of the available hydrogeological information for the region.

Groundwater is expected to occur at a depth of between 5m and 10m below ground level (mbgl) where it forms the water table in the Upper Tertiary Aquifer.

Groundwater is expected, on the basis of local and regional topography, to flow towards Cardinia Creek located 3km to the east. The nearest point of regional groundwater discharge is expected to be south towards Western Port Bay approximately 17km south of the site.

2.6.3 Groundwater Quality & Beneficial Uses

The Victorian Groundwater Beneficial Uses Map Series 1:500,000 shows the groundwater in this vicinity to have a salinity in the range of 3501 to 13000 mg/L TDS[1], and therefore, is classified as Segment C according to the State Environmental Protection Policy (SEPP) *Groundwaters of Victoria ('SEPP Groundwater')*.

The following beneficial uses of groundwater are protected under Segment C of the Groundwater SEPP:

- Stock watering
- Industrial water use
- Primary contact recreation
- Buildings and structures.

2.6.4 Groundwater Resources & Usage

A search of the Victorian Groundwater Database identified:

- Three bores within the site, of which 1 bore was listed for stock watering purposes and 2 bores were for irrigation purposes
- Twelve (12) bores surrounding the site are used for domestic and stock watering purposes
- Four (4) bores surrounding the site are used for irrigation purposes.

It is also worth noting that in the experience of Cardno Lane Piper:

- Groundwater may also be utilised by persons with unregistered bores not appearing on the database.
- While a search radius of 1.5 km has been used, it is unlikely that the site would affect groundwater taken from bores located up-gradient or across-gradient from the site.

[1] Assumes a conversion of electrical conductivity (EC) and total dissolved solids (TDS) as follows: EC x 0.65 µS/cm = TDS mg/L

3 SITE HISTORY & POTENTIAL FOR CONTAMINATION

3.1 Search of Public Records

3.1.1 Environment Protection Authority Records

Priority Sites Register

A search of the EPA Priority (Contaminated) Site Register was conducted on 17 June 2013. "Priority sites" are sites for which EPA has issued a Clean-Up Notice or Pollution Abatement Notice and may present a source of contamination to the nearby environment.

The search indicated that the site is not listed on, and is not in the vicinity of a site listed on the Priority (Contaminated) Site Register at the time of the search (Appendix H). There are no nearby sites appearing on the priority sites register within a 10km radius of the site.

Register of Completed Audit Sites

A search of the EPA register of completed SoEAs/CoEAs was conducted on 17 June 2013. The results indicate that the site is not on the subject of a completed Environmental Audit, and no sites within 1 km have had an environmental audit completed.

Register of Notified (Ongoing) Audit Sites

A search of the EPA register of notified Environmental Audits on 8 January 2013 was conducted. The results indicate that the site is not the subject of an Environmental Audit, and no sites within 1 km were under audit at 8 January 2013.

3.1.2 Aerial Photographs

The DSE archive of aerial photographs dating back to 1960 was searched. Selected series of photos were viewed for evidence of relevant activities on and nearby the site. Copies of the reviewed aerial photographs are presented in Appendix E. Key events relevant to the site are summarised in Table 3-1.

3.1.3 Certificates of Title

A search of the current and historic Certificates of Title was conducted. The current and historical certificates of title are presented in Appendix G. Key events relevant to the site are summarised in Table 3-1.

3.1.4 Energy Safe Victoria Records

As part of the search for USTs, a search of the cathodic protection register was requested by Energy Safe Australia. The search did not identify any cathodic protection systems at the site (Appendix H).

3.1.5 Local Government Records

The City of Casey planning division was contacted and requested to relevant site information such as records of planning applications, complaints and general site history. This search revealed that there was no information relevant to the site in their records.

3.1.6 Acid Sulphate Soils

The Department of Primary Industries Coastal Acid Sulphate Soil Hazard Map was reviewed to assess the potential for coastal acid sulphate soils (CASS) to be present at the site. The maps shows the site is outside the zone noted "estimated extent of probable acid sulphate soils".

3.1.7 DPI Quarantine Records

It had been proposed to review Department of Primary Industry (DPI) records of land quarantined for export beef production due pesticide contamination in soil as part of the assessment. Such records were not available for review at the time the assessment was conducted.

3.1.8 Royal Historical Society

A search of historical records relevant to the site was conducted by the Royal Historical Society of Victoria Inc was conducted. Their primary information source was the Melbourne Directory (Sands and McDougall).

Their report is presented in Appendix H. Key events relevant to the site are summarised in Table 3-1.

3.2 Summary of Relevant Historical Activities

Historical land uses and activities occurring at the site are summarised in Table 3-1. Activities with the potential to cause contamination are in bold text.

Table 3-1: Land Use History & Activities

Date	Information Source	Interpretation
January 1960	Aerial Photograph	Black & White: The site consists of clear **pastures** and tree cover along boundaries. A small dwelling is visible adjacent the western boundary of the site. The likely land use is unimproved **pasture and/or grazing**. A dam is visible towards the eastern boundary of the site. A residential house is located north of the site. The surrounding land use is predominantly **farmland** with similar characteristics to the site observed. There are no signs of market gardening.
24 February 1969	Historical certificate of title	The Equity Trustees Executors and Agency Company Limited of 472 Bourke St, Melbourne (Executor of the Will of Maggie Campbell – Deceased) is the proprietor of the site.
28 July 1969	Historical certificate of title	William Brunt Campbell and Robert John Campbell (Farmers) of Clyde North are the proprietors in equal share.

Date	Information Source	Interpretation
6 August 1969	Historical certificate of title	Robert John Campbell (Farmer) of Clyde North is the proprietor.
6 August 1969	Historical certificate of title	Albert Alfred Quinlan (Farmer) and Nellie Mavis Quinlan (married women) of Mills Rd, Braeside are joint proprietors
January 1970	Aerial Photograph	Black & White: The aerial photograph indicates several dwellings along the western boundary of the site along with driveways leading up to the dwellings. It is unclear whether they are homes or sheds. There are some linear tree plantations apparent, acting as a boundary and wind shield for the site. A dam is visible towards the eastern boundary of the site. The neighbouring property on the north of the site shows activity on the site associated with preparing the site for pastures.
18 December 1975	Historical certificate of title	A. Quinlan Estate Ltd. Of 229 Thomas St, Dandenong is the proprietor.
26 November 1980	Aerial Photograph	Black & White: A cleared pasture and dam is visible along the northern site boundary. No further changes observed on the site. The neighbouring property on the west past Pound Road shows activity on the site associated with building a dam.
10 November 1983	Historical certificate of title	Alfred James Gearon (Farmer) and Nancye Margeret Gearon (Married women) of Pound Rd, Clyde North are joint proprietors.
21 August 1990	Historical certificate of title	Alfred James Gearon died on 23/10/1989 leaving Nancye Margaret Gearon and Francis William Carew as proprietors
21 August 1990	Historical certificate of title	Nancye Margaret Gearon is the sole proprietor
3 July 1991	Aerial Photograph	No further changes observed on the site. The neighbouring property on the west past Pound Road shows activity on the site associated with market gardening.
13 July 1995	Current Certificate of title	Nancye Margaret Gearon of “Oakwood” Pound Rd, Clyde North
6 November 2009	Aerial Photography (Nearmap)	Two houses are visible along the western boundary along with several sheds. No further changes observed on the site. No further changes observed on the neighbouring properties.
4 October 2012	Aerial Photography (Nearmap)	One house appears to be demolished. The dam on the site appears to be full with drainage lines visible leading from the dam. No further changes observed on the site. No further changes observed on the neighbouring properties.
9 May 2013	Aerial Photography (Nearmap)	The remains of the demolished house are no longer visible. The shed located in the middle of the remaining house and shed has been demolished. No further changes observed on the neighbouring properties.

3.3 Previous Site Contamination Assessments

Cardno Lane Piper requested the client provide any previous reports on the site which may be relevant to the current assessment.

Cardno Lane Piper has been advised by the Client that there are no previous environmental site assessments or related documentation available for the site.

3.4 Non-intrusive Site Investigations

3.4.1 Site Inspection & Observations

A detailed site inspection was carried out by a Cardno Lane Piper Environmental Scientist on 3 June 2013. Table 3-2 summarises the observations recorded. Figure 2 illustrates the location of the site features and selected site photographs are presented in Appendix D.

Table 3-2: Site Inspection Observations

Item	Observations & Descriptions
Surface coverings	Grassed paddocks
Site slope & drainage features	Gentle slope towards the south east
Nearby water bodies	Cardinia Creek (3.0km east) and Clyde Creek (2.2km west).
Buildings	One house with a detached car park/garage. Two attached sheds and an open shed (for storing hay bales). Remains of the burnt or demolished shed are also visible.
Manufacturing or chemical processes & infrastructure	Site used for farming practices only
Potential asbestos materials in Buildings	Potential exists for asbestos containing material (ACM) to have been used during the construction of the buildings on the site. *However this report is not an asbestos audit and must not be relied on for identification of asbestos.*
Fuel storage tanks	None observed
Dangerous goods	None observed
Asbestos	Fragment of cement sheet (possibly asbestos) was observed towards the entrance of the site.
Solid waste deposition	Small soil mound (~1.5m^3) located near the entrance to the site. Various timber crates and empty plastic drums were observed towards the south of the shed and near the entrance of the site.
Liquid waste disposal features	None observed
Evidence of previous site contamination investigations	None observed
Evidence of land contamination (staining or odours)	Staining observed corresponding to the burnt remains of the shed.

3.5 Interviews

Interviews were held and enquiries were made with the site owner (Nancye Gearon) regarding previous site use and activities. This yielded the following anecdotal information:

- There was an AST and bowser located on the site near the vicinity of the demolished shed.
- There are two septic tanks located at the site. One next to the car park and one adjacent the demolished shed.
- The site was not used for market gardening. No spraying of herbicides/pesticides were conducted
- Remains of a demolished shed were burnt by arsonists in 2012.
- Soil has been placed at the entrance gates to stop the public from trespassing.
- Only cows were raised on the site – No sheep dips.

3.6 Summary of Potential contamination

The assessment has identified several potential sources of contamination (and related Contaminants of Potential Concern – COPC), which are summarised in Table 3-3.

Table 3-3: Site Activities and Potential Contaminants of Concern

Site Activity / Potential Source	Contaminants of Potential Concern	Comments
On-site		
AST and fuel bowser	TPH (Total Petroleum hydrocarbons), BTEX(benzene, toluene, ethyl benzene, and xylenes), PAH (Polyaromatic Hydrocarbons), metals and phenols	Potential exists for fuels and chemicals used in the operation and maintenance of an AST and fuel bowser. Potential exists for soil contamination around the vicinity of the fuel storage facility.
Remains of a burnt demolished shed	TPH, BTEX, PAH metals, PAH	Limited potential exists for fuels and chemicals used in the arson attack to contaminate soil. Therefore the likelihood of significant impact is considered to be low.
Historic farming practices / farm operation and maintenance	Organochlorine pesticides (OCP) and metals	Including use of organochlorine pesticides. Applies to the majority of the paddocks. Based on the nature of farming at the site (i.e. low intensity farming / grazing), the likelihood of significant impact is considered to be low.
Off-site		
Historic farming practices	OPC, PHCs, BTEX and PAHs	Consistent with onsite

3.7 Ranking Scheme for Potential Contamination

A risk ranking scheme for potential contamination sources has been developed in accordance with in the Department of Sustainability and Environment *General Practice Note Potentially Contaminated Land* (DSE, June 2005). The DSE guidance classifies potentially contaminating activities as having a High, Medium or Low potential to cause contamination of land and groundwater. Table 3-4 presents the full listing of potentially contaminating uses in each risk category or classification.

Table 3-4: Potential for Contamination (DSE, 2005)

High Potential		
• Abattoir	• Dry cleaning	• Pulp or paper works
• Abrasive blasting	• Electrical/electrical components manufacture	• Railway yards
• Airport	• Electricity generation/power station	• Shooting or gun clubs
• Asbestos production/disposal	• Electroplating	• Scrap metal recovery
• Asphalt manufacturing	• Explosives industry	• Service stations/fuel storage
• Automotive repair/engine works	• Fibreglass reinforced plastic manufacture	• Sewage treatment plant
• Battery manufacturing/recycling	• Foundry	• Ship building/breaking yards
• Bitumen manufacturing	• Fuel storage depot	• Shipping facilities – bulk (rate <100 t/day)
• Boat building/maintenance	• Gasworks	• Stock dipping sites
• Breweries/distilleries	• Glass manufacture	• Spray painting
• Brickworks	• Iron and steel works	• Tannery (and associated trades)
• Chemical manufacturing/storage/ blending	• Landfill sites/waste depots	• Textile operations
• Cement manufacture	• Lime works	• Timber preserving/treatment
• Ceramic works	• Metal coating	• Tyre manufacturing
• Coke works	• Metal finishing and treatments	• Underground storage tanks
• Compost manufacturing	• Metal smelting/refining/finishing	• Utility depots
• Concrete batching	• Mining and extractive industries	• Waste treatment/incineration/disposal
• Council works depot	• Oil or gas production/refining	• •Wool scouring
• Defence works	• Pest control depots	• Drum re-conditioning facility
• Printing shops		
Medium Potential		
• Chemical storage	• Market gardens	• Underground storage tank (if recently installed and no

		evidence of leaks)
• Fuel storage	• Waste disposal	• Filling (imported soil)
• Other industrial activities (such as the use or warehousing of chemicals that may be spilt during loading or unloading)		
Low Potential		
Low Potential applies where none of the identified uses or activities in the high and medium potential categories are known to have been carried out on the land.		

The DSE ranking scheme also identifies the "contamination assessment response" required by the responsible planning authority when considering an application for development or rezoning of land for either a "sensitive" or "non-sensitive" land use. An extract from the DSE guideline illustrating this scheme is presented in Table 3-5.

Table 3-5: Contamination Assessment Requirements A, B and C (DSE, 2005)

Proposed Land -Use	Potential for Contamination		
	High	Medium	Low
Sensitive Uses			
Child care centre, pre-school or primary school	A	B	C
Dwellings, residential buildings etc.	A	B	C
Other Uses			
Open space	B	C	C
Agriculture	B	C	C
Retail or office	B	C	C
Industry or warehouse	B	C	C

The contamination assessment response Levels A, B and C have the following meanings:

- **Assessment Level A**: Require an environmental audit as required by Ministerial Direction No. 1 or the Environmental Audit Overlay when a planning scheme amendment or planning permit application would allow a sensitive use to establish on potentially contaminated land.
- An environmental audit is also strongly recommended by the SEPP where a planning permit application would allow a sensitive use to be established on land with 'high potential' for contamination.
- **Assessment Level B**: Require a site assessment from a suitably qualified environmental professional if insufficient information is available to determine if an audit is appropriate. If advised that an audit is not required, default to C.
- **Assessment Level C**: General duty under Section 12(2) (b) and Section 60(1)(a)(iii) of the Planning and Environment Act 1987.

In this case we have considering the proposed use for the entire study area to be "sensitive" as defined by SEPP *Prevention and Management of Contamination of Land* (2002). A sensitive land use includes residential, child care centres, pre-school or primary schools.

4 SITE INVESTIGATIONS

4.1 Soil Investigation Program

4.1.1 Sample Strategy & Methodology

The soil sampling fieldwork was conducted on 10 June 2013. The scope and method of the work is summarised in Table 4-1. Locations were chosen to target areas associated with the vicinity of the AST and bowser, as required in accordance with DSE (2005) guidance where a "medium potential" for contamination activity is identified at a proposed "sensitive use" (e.g. residential) site.

Sampling locations are summarised in Table 4-2 and shown on Figure 2, Appendix A.

Table 4-1: Soil Investigation Activity Summary

Activity	Details
Dates of Field Activity	10 June 2013
Service Location	Services were identified by an independent contractor prior to any sub-surface works being undertaken.
Drilling	All bores were drilled using a land cruiser mounted EziProbe drill rig.
Bores Drilled and Target Depths	Test pits were excavated to 1.0 mbgl.
Soil Logging	Soil encountered during drilling was described and logged. Bore logs are presented in Appendix C.
Soil Sampling	Soil samples were collected at 0.2, 0.5, 1.0 m or at obvious changes in soil lithology, to the base of the soil profile in all onsite boreholes. Soil samples were stored in glass containers provided by the laboratory. The records of the soils encountered, the samples collected including depths and related observations are presented in the borehole records. All samples were labelled with an indelible marker pen on water resistant labels attached to the sample jars.
Decontamination Procedure	Reusable soil sampling equipment was rinsed with Decon 90 and deionised water prior to the collection of each sample.
Soil Screening	Soil samples were field screened by using a calibrated PID and noting any odours and any other olfactory signs of contamination.
Sample Preservation and Transport	Samples were stored on ice, in an esky while on-site and in transit to the laboratory under Chain of Custody documentation.
Borehole Abandonment	Bores were abandoned and backfilled with soil cuttings produced during drilling.

Table 4-2: Sampling Locations

Location	Location Name	Depth of Investigation (m)	Rationale
Target Locations			
AST and fuel bowser	BH01-BH03	1.0	Assess for impacts resulting from the use and storage of fuels and chemicals

The fieldwork was undertaken by an experienced environmental scientist in accordance with the agreed scope of work and using methods set out in the Cardno Lane Piper Integrated Management System which conforms to industry standards of practice.

The records and observations made during the field work are presented in bore logs and fieldwork records presented in the Appendices.

4.1.2 Laboratory Analysis – Soil

All near-surface samples were selected for laboratory testing. The analysis program was based on general screening for potential contamination, visual and olfactory observations, and the site history review. The selected samples were tested for a broad range of inorganic and organic parameters.

Table 4-3: Laboratory Testing Program – Target Samples

Location	Samples	Analysis
AST and bowser	BH01- BH03 at (0.1, 0.5 and 0.9 mbgl)	One (1) sample for IWRG621 Screen[1] Five (5) samples for TPH, BTEX and Lead
Analytical Screen Definitions		
Vic EPA IWRG621 Screen[1]: Total Recoverable Hydrocarbons (TRH), VOC, Vinyl Chloride, Polycyclic Aromatic Hydrocarbons (PAH), OC Pesticides, PCBs, Phenols, Cyanide, Fluoride, Metals (12), hexavalent Chromium		

Copies of the NATA stamped laboratory reports and the Cardno Lane Piper Chain of Custody and sample receipt records are included in Appendix F. Tabulated laboratory results are presented in Appendix B. The quality control/ quality assurance (QA/QC) of the soil sampling program is discussed in Section 4.2.

4.2 Quality Control / Quality Assurance

A critical aspect of ESAs is the demonstration of the quality of the data used as the basis for the assessment. This is achieved through a Data Validation process which includes a review of the following aspects of the data collection process:

- Project Quality Objectives and Plans
- Data Representativeness
- Data Precision & Accuracy
- Laboratory Performance

- Data Comparability
- Data Set Completeness.

A detailed review of these aspects has been undertaken, the results of which are presented in Appendix F.

The data validation process has concluded that there are no significant systematic errors in the data collection process for soil and groundwater. Therefore, the data set used as the basis for the soil and groundwater assessment is considered valid and complete.

5 CONTAMINATION ASSESSMENT CRITERIA

5.1 Soil Assessment Criteria

The following sections discuss the sources of assessment criteria adopted for this ESA. The relevant assessment criteria values are included with and compared with the tabulated analytical data in Appendix B.

5.1.1 Onsite Retention

The *SEPP Prevention and Management of Contamination of Land* (2002) provides the regulatory framework for the protection of land and its associated "beneficial uses" throughout Victoria. This policy allows for a consistent approach to the prevention of contamination of land, and clean-up of pollution of land in Victoria, and sets environmental quality indicators and objectives for each beneficial use. SEPP Land defines certain land use categories and associated beneficial uses of land to be protected. The proposed development of the site described in Section 2.2 is for residential, primary school and open space. The land use(s) associated with this development would be:

- Sensitive Use (Low Density)
- Recreation/Open Space

The beneficial uses of land that are protected for this type of use are:

- Maintenance of modified ecosystems.
- Maintenance of highly modified ecosystems.
- Human health.
- Buildings and structures.
- Production of food, flora and fibre.

Below is discussed the assessment criteria adopted for assessing the protection of these relevant beneficial uses of land at the site.

- **Maintenance of Ecosystems:** SEPP Land defers to NEPM for assessing indicators and objectives for the protection of this beneficial use of land. The investigation level (IL) for ecosystem protection is defined as "Interim Urban Ecological Investigation Levels (EIL) and are defined in Table 5-A of Schedule B (1) of NEPM. Where NEPM EILs are not available, assessment criteria have been sourced from ANZECC 'B' EILs, NSWEPA (1994) Threshold Concentrations for Sensitive Land Use and Ministry of Housing, Spatial Planning and the environment (2009) *Soil Remediation Circular 2009.*
- **Human Health:** SEPP Land defers to NEPM for assessing indicators and objectives for the protection of this beneficial use of land. The IL for human health protection are described as "Human Health Based Investigation Levels" (HIL). For this type of land use scenario, HIL-A in Table 5-A of Schedule B (1) of NEPM applies ("Standard" residential with garden/accessible soil, no more than 10% of food from home-grown produce (no poultry)). This category also applies to children's day-care centres, kindergartens, preschools and primary schools.
- **Buildings and Structures:** SEPP Land states that contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials (however does not defer to a particular guidance document to assess this). Australian standards exist for assessing the impacts of sulfates, chlorides and pH on concrete

structures. Cardno Lane Piper is not aware of petroleum hydrocarbons (the COPC for this Assessment) impacting the integrity of buildings and structures – and as such, this beneficial use has not been considered in detail further.

- **Production of Food, Flora and Fibre:** SEPP Land defers to levels referenced in the Australian and New Zealand Food Authority Standards Codes for assessing the production of food, flora and fibre at a site. In this case, the adoption of NEPM EIL (which are the most sensitive IL) as an initial screening tool has been adopted.

The initial screening levels for determining the "contamination status of land" are generally the most conservative of these levels, which are the EILs.

The aesthetics beneficial use of land may be precluded where land is considered offensive to the senses – e.g. through the presence of offensive odour or unusually coloured staining. It is therefore not possible to quantify preclusion of this protected beneficial use through physical measurement and as such criteria for the assessment land aesthetics cannot be adopted.

NEPM does not offer IL for assessing TPH and BTEX. Human health IL for these COPC have been taken from Friebel, E and Nadebaum, P (September 2011) *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater, CRC CARE Technical Report no. 10, CRC for Contamination Assessment and Remediation of the Environment, Adelaide Australia* (CRC CARE). In addition, ecological IL for these COPC have been taken from the New South Wales Environment Protection Authority (December 1994) *Contaminated Sites - Guidelines for Assessing Service Station Sites* have also been used.

The ecological and human health "Investigation levels" are not intended to be interpreted as "maximum permissible levels", "clean up levels" or "safe levels", rather, they are levels at which further investigation or assessment should be undertaken to provide assurance that unacceptable contamination does not occur. Subsequent assessment on a site-specific basis often results in higher levels being acceptable. However, since the "investigation levels" are generally set at conservatively low levels, they are often taken to be the acceptable levels.

5.1.2 Offsite Disposal

EPA Publication IWRG621 presents criteria for classifying waste soil into the following categories:

- **Category A:** highly contaminated and not suitable for landfill disposal. Category A waste must be treated before landfilling.
- **Category B:** significantly contaminated but suitable for disposal to selected landfills (e.g. SITA Dandenong South).
- **Category C:** low level contaminated soil suitable for disposal to a number of EPA licensed landfills.
- **Fill Material:** not significantly contaminated and generally suitable for re-use (with some exceptions).

The classification of soil at the site is beyond the scope of this Assessment (and further data would need to be collected before any classification could be reached). IWRG621 guideline values have been included in Table 1 (Appendix B) – to allow a preliminary interpretation of the soil contaminant concentrations and its classification based on the data collected to date for indicative purposes only.

6 DISCUSSION OF SOIL RESULTS

6.1 Field Observations

Soil conditions observed during the soil sampling program are summarised in Table 6-1. Detailed soil descriptions are provided in Appendix C Soil Bore Logs Construction Details.

Table 6-1: Typical Soil Profile

Sub-Surface Horizon	Typical Depth Range	Description
Fill	Surface to ~0.3m	Typically comprises clay and sand with lesser proportions of gravel.
Silty CLAY	0.3 m to 0.7 m	High plasticity grey to brown residual basaltic clay.
Silty CLAY	0.7- to maximum depth of investigation	Silty clay with mottling.

6.2 PID Screening Results

Soil samples were screened for the presence of VOCs using a photo-ionisation detector (PID) in the headspace of bagged samples. The results of PID screening were generally low and do not indicate significant or widespread contamination by volatile organic compounds (that are normally detected by PID).

6.3 Laboratory Soil Results

The results of laboratory analysis have been compared against adopted assessment criteria and presented in Appendix B. An interpretation of these data are summarised as follows:

- All samples analysed for BTEX, Chlorinated hydrocarbons, benzenes and phenols, herbicides, inorganics, MAH, metals, OCP, PAH, Phenolics, PCBs and solvents were below laboratory limits of reporting (LORs).
- One or more samples analysed for TPH and metals reported concentrations either below the LORs or otherwise detectable concentrations was below all adopted assessment criteria.

6.4 Protection of Beneficial Uses of Land

The results have also been interpreted with reference to SEPP *Prevention and Management of Contamination of Land* (2002). The following discusses the results of this assessment in relation to the beneficial uses of the site protected by this policy.

Table 6-2 discusses potential risks posed to the protected beneficial uses of land based on the results of soil analysis and in consideration of the findings of the Phase 1 (desktop and site history research) findings.

Table 6-2: Risk to Protected Beneficial Uses

Protected Beneficial Use	Risk Potential
Maintenance of modified ecosystems	The soil sampling results indicates negligible potential for harm to sensitive flora or fauna.
Human health	All samples analysed reported contaminant concentrations below the NEPM HIL-A criteria adopted for standard residential use. Potential exists for asbestos containing material (ACM) to have been used during the construction of the buildings on the site. *This report is not an asbestos audit and must not be relied on for identification of asbestos.*
Buildings and structures	Full assessment of potential risks to buildings and structures falls outside the scope for this assessment. This report is not a geotechnical or corrosion risk assessment and specialist advice would be needed to assess potential corrosion risk to buildings and structures.
Aesthetics	Field observations made during the site inspection and sampling program did not identify soil or materials considered offensive to the senses. As such it is considered unlikely soil quality at the site would pose a risk to the aesthetics of land.
Production of food, flora and fibre	The soil sampling results indicates negligible potential for harm to sensitive flora or fauna.

6.5 Assessment for Offsite Disposal

Based on the results of the testing the soil from the vicinity of the AST and bowser can be classified as fill material. As such soil from this area can be reused onsite.

7 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The purpose of this assessment was to provide the Client with preliminary advice on the contamination status of the site and the consequent implications for the suitability of the site for its intended use.

The specific objectives of the assessment, subject to the limitations stated in Section 1.5 are:

1. Identify the potential for past or current activities at the site (and in the immediate surrounds) to cause contamination of land or groundwater at the site.
2. Assess the potential for the protected beneficial uses of land to be impacted due to potential contamination.
3. Based on the nature of former and current land uses and site activities, determine the nature of further works (if any) which may be required in accordance with DSE *Potentially Contamination Land General Practice Note* (2005).

7.1 Summary of Contamination Potential

The site history review has identified several potential sources of contamination which are described in detail in Section 3 of this report (including Table 3-3) and their locations illustrated on Figure 3, Appendix A. These can be summarised as:

- The findings of the Assessment have not identified any former or current activities with a "High" potential for contamination based on DSE (2005) criteria.
- The former AST and bowser located adjacent the demolished shed poses a "Medium" potential for contamination based strictly on DSE (2005) criteria. Soil near the AST and bowser has the potential to be contaminated with TPH, BTEX and Lead. However, the soil sampling results and PID readings taken in this area suggest limited impact.
- Former and current use of the site for farming purposes, probably including use of machinery, has the potential to contaminate soil with OCP, metals, PHC, BTEX and PAH. Based on the findings of the desktop review, observations made at the site and information provided by the site owner, the likelihood of significant impact associated with this use is considered to be low.
- Soil stockpile and solid waste deposition areas may strictly be considered "Filling (imported soil)", and as such would also pose a "Medium" potential for contamination based strictly on DSE (2005) criteria. However, based on the observed volume and observations made during the site inspection, the actual potential for widespread contamination to result from this source is also considered to be low.
- All other former and current site activities identified in the Assessment are classified "Low" potential for contamination in accordance with DSE (2005) criteria.
- There is low potential for land immediately surrounding the site to cause contamination which would adversely affect development of the site.

7.2 Summary of Soil Contamination Results

The results of the limited soil sampling and testing in the vicinity of the AST and bowser indicate that:

- Contaminants of potential concern associated with fuel storage and dispensing were reported at concentrations well below the adopted criteria, indicating limited potential for contamination.
- Soil at the vicinity of the AST and bowser is classified as “Fill material” in accordance with Victorian Industrial Waste Resource Guidelines (IWRG621) and can be reused on-site.
- Visible fragments of solid waste suspected to be asbestos cement sheet were observed at the surface near the entrance of the site along Pound Road. However no asbestos laboratory testing was conducted (consistent with the assessment’s scope of works).

7.3 Significance of Land Contamination

The site is proposed to be developed for low to medium density residential housing with public open space, a primary school and a community centre.

In accordance with Department of Sustainability and Environment (DSE) *General Practice Note Potentially Contaminated Land* (2005) “Fuel Storage” and ”Waste disposal” are classified strictly as having a “Medium” potential for contamination. However, the soil sampling results and PID readings taken at the vicinity of the AST and bowser suggest limited impact. However the desktop review, aerial photos and the site inspection indicate low impact for contamination.

The results of the targeted soil investigation indicate that the soils around of vicinity of the AST and bowser are unlikely to present a human health risk to residents.

Historic farming practices are generally non-intensive in nature and therefore the potential for widespread contamination to result from these activities is low.

Based on the identified low potential for contamination, in accordance with DSE (2005) criteria an environmental audit is not required for the site or any part of the site.

7.4 Recommendations

It is recommended that prior to development of the site, stockpiled soil and remnants of the demolished burnt building be removed and disposed offsite.

If during other site works; soil staining, odours or materials potentially containing asbestos (e.g. cement sheet) are observed, it is recommended a contaminated land and/or hygienist (in the case of asbestos) specialist be consulted and further investigation and/or management undertaken as required.

An asbestos / hazardous material audit of existing buildings should be conducted in accordance with Victorian Occupational Health and Safety Regulations (2007) prior to demolition. This should also include an assessment of potential ACM identified on the ground surface.

8 REFERENCES

Legislation and Guidelines

1. *Environment Protection Act*, 1970 (Act No.8056/1970), Victoria.
2. Government of Victoria (2002). *State Environmental Protection Policy (Prevention and Management of Contamination of Land)*. Victorian Government Gazette, S95, 4 June 2002.
3. Department of Sustainability and Environment (June 2005) *General Practice Note Potentially Contaminated Land*

General References

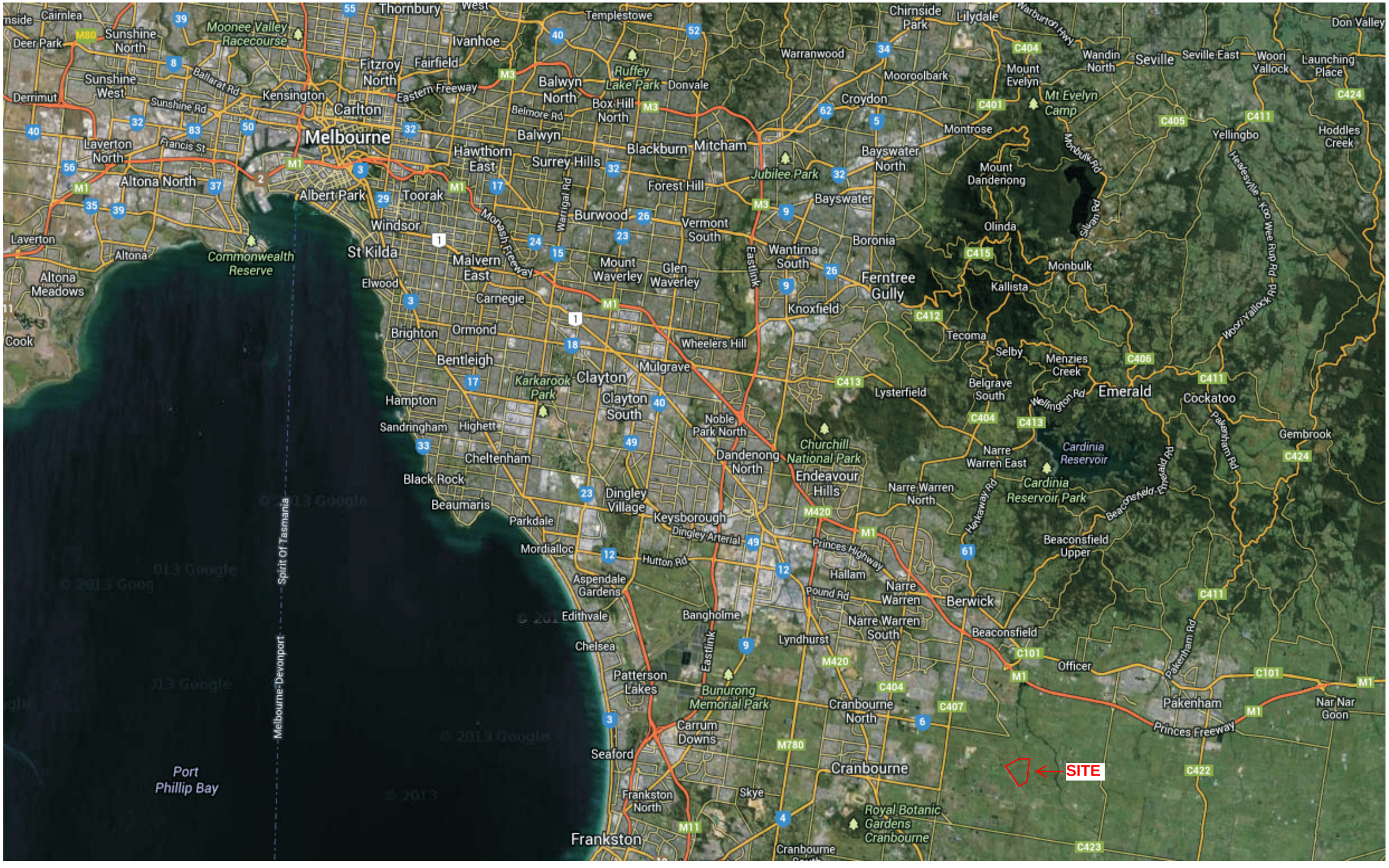
4. Australian & New Zealand Environment & Conservation Council / National Health and Medical Research Council (1992) *Australian and New Zealand Guidelines for the Assessment & Management of Contaminated Sites*. *January 1992.*
5. EPA (2009*) Sampling and Analysis of Waters, Wastewaters, Soil and Wastes*. Publication IWRG701, June 2009, Environment Protection Authority, Victoria.
6. EPA (2009) *Soil Hazard Categorisation and Management.* Publication IWRG621, June 2009, Environment Protection Authority, Victoria.
7. National Environmental Health Forum (1998) *Health-based Soil Investigation Levels, Soil Series No 1,* 1996 and 1998.
8. NEPC (National Environment Protection Council) (1999) *National Environment Protection (Assessment of Site Contamination)* Measure, December 1999.
9. Standards Australia (2005) *Guide to the sampling and investigation of potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds*. AS4482.1-2005
10. Standards Australia (1999) *Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances.* AS4482.2-1999.
11. Department of Natural Resources and Environment; Groundwater Resources Victoria Map.

Appendix A
2 Pages

Figures

Figure 1: Locality Plan

Figure 2: Site Features & Sampling Locations



Base image source: Google 2013

10 km

Cardno LanePiper Shaping the Future Cardno Lane Piper Pty Ltd	Limited ESA 1505 - 1525 Pound Rd, Clyde North	SCALE (A3): As Shown	DATE: 6/5/2013	TITLE: Site Locality	
		JOB No: 213157	DRAWN:SD		
		REF: 213157Figure01.cdr	CHECKED: LJM	REV: 0	FIG: 1

N

Pound Rd

Hardys Rd

Site Entrance

Dam

Open shed

Residential

Garage

Demolished & Burnt shed remains

BH01

BH02

BH02

Shed - Household goods

LEGEND

Site Boundary

AST and Bowser

Scale
100 m

Base image source: Nearmap 2013

Cardno LanePiper
Shaping the Future
Cardno Lane Piper Pty Ltd

Limited ESA
1505 - 1525 Pound Rd, Clyde North

SCALE (A3): As Shown	DATE: 6/5/2013	TITLE: Site Features & Sample Locations	
JOB No: 213157	DRAWN:SD		
REF: 213157Figure02.cdr	CHECKED: LJM	REV: 0	FIG: 2

Appendix B
3 Pages

Tables of Test Results

Table 1: Soil Analytical Results

Table 2: QAQC Results

Table 1: Soil Analytical Results

Limited ESA
1505-1525 Pound Rd, Clyde North
DFC (Project Management)

Field_ID	BH01/0.1	BH01/0.5	BH02/0.1	BH02/0.5	BH03/0.1	BH03/0.5	QC1
LocCode	BH01/0.1	BH01/0.5	BH02/0.1	BH02/0.5	BH03/0.1	BH03/0.5	BH03/0.1
Sampled_Date	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/06/2013
Matrix_Description	Soil						

Chem_Group	ChemName	Units	EQL	Category A Contaminated Soil (TC2)	Category B Contaminated Soil (TC1)	Category C Contaminated Soil (TC0)	NEPM 1999 EIL	NEPM 1999 HIL A	NEPM 1999 HIL E							
BTEX	Benzene	mg/kg	0.1	16	4	1				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ethylbenzene	mg/kg	0.1							<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Toluene	mg/kg	0.1							<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Xylene (m & p)	mg/kg	0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Xylene (o)	mg/kg	0.1							<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Xylene Total	mg/kg	0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	C6-C10 less BTEX (F1)	mg/kg	20							<20	<20	<20	<20	<20	<20	<20
Chlorinated Hydrocarbons	1,1,1,2-tetrachloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,1,1-trichloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,1,2,2-tetrachloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,1,2-trichloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,1-dichloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,1-dichloroethene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,2,3-trichloropropane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,2-dichloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,2-dichloropropane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,3-dichloropropane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Bromochloromethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Bromodichloromethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Bromoform	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Carbon tetrachloride	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Chlorodibromomethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Chloroethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Chloroform	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Chloromethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	cis-1,2-dichloroethene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	cis-1,3-dichloropropene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Dibromomethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Dichloromethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Hexachlorobutadiene	mg/kg	0.2	11	2.8					-	-	<0.2	-	-	-	-
	Trichloroethene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Tetrachloroethene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Chlorinated hydrocarbons IWRG621	mg/kg				1				-	-	<1.15	-	-	-	-
	trans-1,2-dichloroethene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Other chlorinated hydrocarbons IWRG621	mg/kg		50	10					-	-	<0.9	-	-	-	-
	trans-1,3-dichloropropene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Vinyl chloride	mg/kg	0.05	4.8	1.2					-	-	<0.05	-	-	-	-
Halogenated Benzenes	1,2,4-trichlorobenzene	mg/kg	0.2							-	-	<0.2	-	-	-	-
	1,2-dichlorobenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,3-dichlorobenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,4-dichlorobenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	4-chlorotoluene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Bromobenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Chlorobenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Hexachlorobenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
Halogenated Hydrocarbons	1,2-dibromoethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Bromomethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Dichlorodifluoromethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Iodomethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Trichlorofluoromethane	mg/kg	0.05							-	-	<0.05	-	-	-	-
Halogenated Phenols	2,4,5-trichlorophenol	mg/kg	1							-	-	<1	-	-	-	-
	2,4,6-trichlorophenol	mg/kg	1							-	-	<1	-	-	-	-
	2,4-dichlorophenol	mg/kg	0.5							-	-	<0.5	-	-	-	-
	2,6-dichlorophenol	mg/kg	0.5							-	-	<0.5	-	-	-	-
	2-chlorophenol	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Phenols (non-halogenated) IWRG621	mg/kg		2200	560	60				-	-	<57.2	-	-	-	-
	Phenols(halogenated) IWRG621	mg/kg		320	10	1				-	-	<5.5	-	-	-	-
	Pentachlorophenol	mg/kg	1							-	-	<1	-	-	-	-
	tetrachlorophenols	mg/kg	1							-	-	<1	-	-	-	-
Herbicides	Dinoseb	mg/kg	20							-	-	<20	-	-	-	-
Inorganics	Cyanide Total	mg/kg	5	10000	2500	50		500	1000	-	-	<5	-	-	-	-
	Fluoride	mg/kg	100	40000	10000	450				-	-	<100	-	-	-	-
	Moisture Content (dried @ 103°C)	%	0.1							11	8.7	8.5	8.1	6.5	6.5	6.8
	pH (aqueous extract)	pH_Units	0.1	2-12.5		4-9				-	-	5.8	-	-	-	-
Lead	Lead	mg/kg	5	6000	1500	300	600	300	600	26	<5	8.1	16	12	<5	-
MAH	Monocylic aromatic hydrocarbons IWRG621	mg/kg		240	70	7				<0.6	<0.6	<0.65	<0.6	<0.6	<0.6	<0.6
	1,2,4-trimethylbenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	1,3,5-trimethylbenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Isopropylbenzene	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Styrene	mg/kg	0.05							-	-	<0.05	-	-	-	-
Metals	Arsenic	mg/kg	2	2000	500	20	20	100	200	-	-	<2	-	-	-	-
	Cadmium	mg/kg	0.4	400	100	3	3	20	40	-	-	<0.4	-	-	-	-
	Chromium (hexavalent)	mg/kg	1	2000	500	1	1	100	200	-	-	<1	-	-	-	-
	Chromium (III+VI)	mg/kg	5							-	-	5.9	-	-	-	-
	Copper	mg/kg	5	20000	5000	100	100	1000	2000	-	-	<5	-	-	-	-
	Mercury	mg/kg	0.1	300	75	1	1	15	30	-	-	<0.1	-	-	-	-
	Molybdenum	mg/kg	10	4000	1000	40				-	-	<10	-	-	-	-
	Nickel	mg/kg	5	12000	3000	60	60	600	600	-	-	<5	-	-	-	-
	Selenium	mg/kg	2	200	50	10				-	-	<2	-	-	-	-
	Silver	mg/kg	5	720	180	10				-	-	<5	-	-	-	-
	Tin	mg/kg	10		500	50				-	-	<10	-	-	-	-
	Zinc	mg/kg	5	140000	35000	200	200	7000	14000	-	-	26	-	-	-	-

Table 1: Soil ANalytical Results

Field_ID	BH01/0.1	BH01/0.5	BH02/0.1	BH02/0.5	BH03/0.1	BH03/0.5	QC1
LocCode	BH01/0.1	BH01/0.5	BH02/0.1	BH02/0.5	BH03/0.1	BH03/0.5	BH03/0.1
Sampled_Date	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/06/2013
Matrix_Description	Soil						

Chem_Group	ChemName	Units	EQL	Category A Contaminated Soil (TC2)	Category B Contaminated Soil (TC1)	Category C Contaminated Soil (TC0)	NEPM 1999 EIL	NEPM 1999 HIL A	NEPM 1999 HIL E							
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05							-	-	<0.05	-	-	-	-
	a-BHC	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Aldrin	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Aldrin + Dieldrin	mg/kg		4.8	1.2			10	20	-	-	<0.1	-	-	-	-
	b-BHC	mg/kg	0.05							-	-	<0.05	-	-	-	-
	chlordane	mg/kg	0.1	16	4			50	100	-	-	<0.1	-	-	-	-
	d-BHC	mg/kg	0.05							-	-	<0.05	-	-	-	-
	DDD	mg/kg	0.05							-	-	<0.05	-	-	-	-
	DDT	mg/kg	0.05							-	-	<0.05	-	-	-	-
	DDT+DDE+DDD	mg/kg		50	50			200	400	-	-	<0.15	-	-	-	-
	Dieldrin	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Endosulfan I	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Endosulfan II	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Endosulfan sulphate	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Endrin	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Endrin aldehyde	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Endrin ketone	mg/kg	0.05							-	-	<0.05	-	-	-	-
	g-BHC (Lindane)	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Heptachlor	mg/kg	0.05	4.8	1.2			10	20	-	-	<0.05	-	-	-	-
	Heptachlor epoxide	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Organochlorine pesticides IWRG621	mg/kg				1				-	-	<1	-	-	-	-
	Other organochlorine pesticides IWRG621	mg/kg		50	10					-	-	<0.75	-	-	-	-
	Methoxychlor	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Toxaphene	mg/kg	0.1							-	-	<0.1	-	-	-	-
PAH	Benzo[b+j]fluoranthene	mg/kg	0.5							-	-	<0.5	-	-	-	-
PAH/Phenols	Polycylic aromatic hydrocarbons IWRG621	mg/kg		400	100	20				<0.5	<0.5	<7.5	<0.5	<0.5	<0.5	<0.5
	2,4-dimethylphenol	mg/kg	0.5							-	-	<0.5	-	-	-	-
	2,4-dinitrophenol	mg/kg	5							-	-	<5	-	-	-	-
	2-methylphenol	mg/kg	0.2							-	-	<0.2	-	-	-	-
	2-nitrophenol	mg/kg	1							-	-	<1	-	-	-	-
	3-&4-methylphenol	mg/kg	0.4							-	-	<0.4	-	-	-	-
	4,6-Dinitro-2-methylphenol	mg/kg	5							-	-	<5	-	-	-	-
	4-chloro-3-methylphenol	mg/kg	1							-	-	<1	-	-	-	-
	4-nitrophenol	mg/kg	5							-	-	<5	-	-	-	-
	Acenaphthene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Acenaphthylene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Anthracene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Benz(a)anthracene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Benzo(a) pyrene	mg/kg	0.5	20	5	1		1	2	-	-	<0.5	-	-	-	-
	Benzo(g,h,i)perylene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Benzo(k)fluoranthene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Chrysene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Dibenz(a,h)anthracene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Fluoranthene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Fluorene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Naphthalene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	PAHs (Sum of total)	mg/kg	0.5					20	40	-	-	<0.5	-	-	-	-
	Phenanthrene	mg/kg	0.5							-	-	<0.5	-	-	-	-
	Phenol	mg/kg	0.5					8500	17000	-	-	<0.5	-	-	-	-
	Pyrene	mg/kg	0.5							-	-	<0.5	-	-	-	-
Phenolics	4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20							-	-	<20	-	-	-	-
	Phenols (Total Halogenated)	mg/kg	1							-	-	<1	-	-	-	-
	Phenols (Total Non Halogenated)	mg/kg	20							-	-	<20	-	-	-	-
Polychlorinated Biphenyls	Arochlor 1016	mg/kg	0.1							-	-	<0.1	-	-	-	-
	Arochlor 1221	mg/kg	0.1							-	-	<0.1	-	-	-	-
	Arochlor 1232	mg/kg	0.1							-	-	<0.1	-	-	-	-
	Arochlor 1242	mg/kg	0.1							-	-	<0.1	-	-	-	-
	Arochlor 1248	mg/kg	0.1							-	-	<0.1	-	-	-	-
	Arochlor 1254	mg/kg	0.1							-	-	<0.1	-	-	-	-
	Arochlor 1260	mg/kg	0.1							-	-	<0.1	-	-	-	-
	PCBs (Sum of total)	mg/kg	0.1	50		2		10	20	-	-	<0.1	-	-	-	-
Solvents	Methyl Ethyl Ketone	mg/kg	0.05							-	-	<0.05	-	-	-	-
	4-Methyl-2-pentanone	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Acetone	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Allyl chloride	mg/kg	0.05							-	-	<0.05	-	-	-	-
	Carbon disulfide	mg/kg	0.05							-	-	<0.05	-	-	-	-
TPH	C10-C16	mg/kg	50							<50	<50	<50	<50	<50	<50	<50
	C16-C34	mg/kg	100							<100	<100	<100	<100	<100	<100	<100
	C34-C40	mg/kg	100							<100	<100	<100	<100	<100	<100	<100
	F2-NAPHTHALENE	mg/kg	50							<50	<50	<50	<50	<50	<50	<50
	C6 - C9	mg/kg	20	2600	650	100				<20	<20	<20	<20	<20	<20	<20
	C10 - C14	mg/kg	20							<20	<20	<20	<20	<20	<20	<20
	C15 - C28	mg/kg	50							51	<50	<50	<50	<50	<50	<50
	C29-C36	mg/kg	50							<50	<50	<50	<50	<50	<50	<50
	+C10 - C36 (Sum of total)	mg/kg	50	40000	10000	1000				51 - 86	<50	<50	<50	<50	<50	<50
	C6-C10	mg/kg	20							<20	<20	<20	<20	<20	<20	<20

Field Duplicates (SOIL)
Filter: SDG in('11/06/2013')

SDG	6/11/2013	6/11/2013	
Field_ID	BH03/0.1	QC1	**RPD**
Sampled_	11/06/2013	11/06/2013	

Chem_Gr	**ChemName**	**Units**	**EQL**			
BTEX	Benzene	mg/kg	0.1	<0.1	<0.1	0
	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0
	Toluene	mg/kg	0.1	<0.1	<0.1	0
	Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	0
	Xylene (o)	mg/kg	0.1	<0.1	<0.1	0
	Xylene Total	mg/kg	0.3	<0.3	<0.3	0
	C6-C10 less BTEX (F1)	mg/kg	20	<20.0	<20.0	0
Inorganics	Moisture Content (dried @ 103°C)	%	0.1	6.5	6.8	5
PAH/Phen	Naphthalene	mg/kg	0.5	<0.5	<0.5	0
TPH	C10-C16	mg/kg	50	<50.0	<50.0	0
	C16-C34	mg/kg	100	<100.0	<100.0	0
	C34-C40	mg/kg	100	<100.0	<100.0	0
	F2-NAPHTHALENE	mg/kg	50	<50.0	<50.0	0
	C6 - C9	mg/kg	20	<20.0	<20.0	0
	C10 - C14	mg/kg	20	<20.0	<20.0	0
	C15 - C28	mg/kg	50	<50.0	<50.0	0
	C29-C36	mg/kg	50	<50.0	<50.0	0
	+C10 - C36 (Sum of total)	mg/kg	50	<50.0	<50.0	0
	C6-C10	mg/kg	20	<20.0	<20.0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold

Appendix C
4 Pages

Field Sheets

Bore Logs

Cardno Lane Piper UCS

Borehole Record: **BH01**

Project: Limited ESA	**Position:**	**Date Drilled:**	10 June 2013
		Drill Rig:	LandCruiser Eziprobe
Location: 1505-1525 Pound Rd, Clyde North,Vic	**Surface Level:**	**Drilling Method:**	DirectPush
	Top of Casing:		
Job No.: 213157	**Inclination:** Vertical	**Logged/Checked:**	SD/CDF

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	ROOTMATTER		0.0			
0.03	FILL Sandy CLAY (CL), low plasticity, slightly fissured, grey brown, black, moist with occasional gravel			BH01/0.1	0.1	
0.25	Silty CLAY (CH) high plasticity, moderately fissured, grey, firm, moist		0.5	BH01/0.5	0.3	
0.7	Silty Clay (CH) high plasticity, moderately fissured, very stiff, mottled orange grey red, slightly moist			BH01/0.9	0.0	
			1.0			
	End of BH01 at 1.1m					

Key:
For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes

Enviro BH Log 11/09

Notes:

Groundwater Observations:
Groundwater not encountered during drilling

Borehole Record: **BH02**

Project: Limited ESA	**Position:**	**Date Drilled:**	10 June 2013
		Drill Rig:	LandCruiser Eziprobe
Location: 1505-1525 Pound Rd, Clyde North, Vic	**Surface Level:**	**Drilling Method:**	DirectPush
	Top of Casing:		
Job No.: 213157	**Inclination: Vertical**	**Logged/Checked:**	SD/CDF

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	ROOTMATTER		0.0			
0.03	FILL Sandy CLAY (CL) with gravel, low plasticity, nil fissuring, grey brown, stiff, moist			BH02/0.1	0.2	
0.3	Silty CLAY (CH) high plasticity, slightly fissured, grey brown, firm, moist		0.5	BH02/0.5	0.6	
0.7	Silty CLAY (CH) high plasticity, moderately fissured, mottled orange red grey, very stiff, slightly moist			BH02/0.9	0.2	
			1.0			
	End of BH02 at 1.1m					

Key:
For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes

Enviro BH Log 11/09

Notes:

Groundwater Observations:
Groundwater not encountered during drilling

Borehole Record: **BH03**

Project: Limited ESA	**Position:**	**Date Drilled:**	10 June 2013
		Drill Rig:	LandCruiser EziProbe
Location: 1505-1525 Pound Rd, Clyde North,Vic	**Surface Level:**	**Drilling Method:**	DirectPush
	Top of Casing:		
Job No.: 213157	**Inclination: Vertical**	**Logged/Checked:**	SD/CDF

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	ROOTMATTER		0.0			
0.04	FILL Sandy CLAY (CL) low plasticity, nil fissured, brown grey, moist with occasional gravel			BH03/0.1	0.1	
0.3	Silty CLAY (CH) high plasticity, slightly fissured, grey mottled brown, firm, moist			BH03/0.5 QC1	0.0	
0.75	Silty CLAY (CH) high plasticity, moderately fissured, mottled grey red orange, very stiff, slightly moist			BH03/0.9	0.0	
			1.0			
	End of BH03 at 1.1m					

Key:
For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes

Enviro BH Log 11/09

Notes:

Groundwater Observations:
Groundwater not encountered during drilling

Unified Classification System (Environmental)

(in accordance with AS1726)

PARTICLE SIZES

TERM	SIZE (mm)
BOULDER	>200
COBBLE	60 to 200
GRAVEL	
Coarse	20 to 60
Medium	6 to 20
Fine	2 to 6
SAND	
Coarse	0.6 to 2
Medium	0.2 to 0.6
Fine	0.06 to 0.2
SILT	0.002 to 0.06
CLAY	< 0.002

COHESIVE SOILS

TERM	UNDRAINED SHEAR STRENGTH (kPa)
Very Soft	0 to 12.5
Soft	12.5 to 25
Firm	25 to 50
Stiff	50 to 100
Very Stiff	100 to 200
Hard	≥ 200

COHESIONLESS SOILS

TERM	'N' (SPT) VALUE (blows / 300mm)	RELATIVE DENSITY (%)	ANGLE SHEAR RESISTANCE (degrees)
Very Loose	0 to 4	< 15	25 to 30
Loose	4 to 10	15 to 35	27 to 32
Medium Dense	10 to 30	35 to 65	30 to 35
Dense	30 to 50	65 to 85	35 to 40
Very Dense	> 50	≥ 85	38 to 43

STRUCTURE

TERM	SIZE OF BLOCKS (mm)
Blocky	> 60
Cloddy	20 to 60
Nutty	6 to 20
Granular	0.6 to 6
Prismatic	Stated
Shattered	< 10

SAMPLES

BS = Bulk sample
D = Disturbed sample
$U_{(n)}$ = Undisturbed tube sample ('n' denotes internal dia in mm)
BH3/1.0 = Environmental Soil Sample (Borehole No./Depth)
■ = Undisturbed tube recovery
▨ = Undisturbed tube non-recovery
H = Headspace vial

CONTAMINATION RANKING

V = Visual evidence of contamination
O = Olfactory evidence of contamination

0 = No odour or visual evidence of contamination
1 = Slight odour or visual evidence of contamination
2 = Odour or visual evidence of contamination
3 = Obvious visual evidence/strong odour of contamination

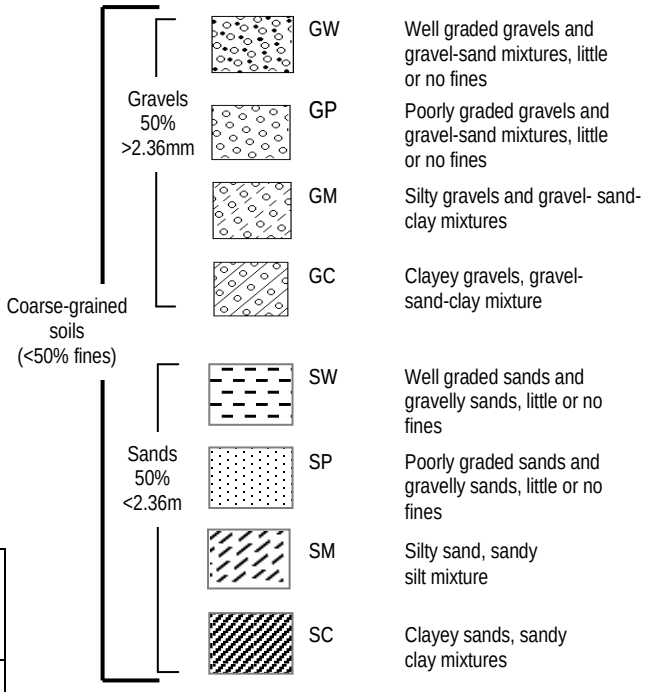
FIELD EQUIPMENT

PID = Photo ionization detector
CGD = Combustible gas detector

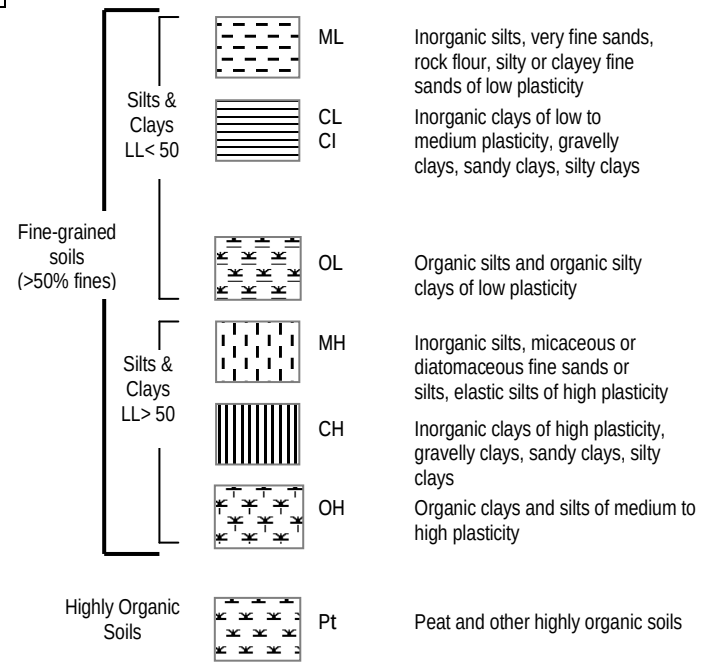
IDENTIFICATION OF SOILS

FILL

COARSE GRAINED SOILS



FINE GRAINED SOILS



Highly Organic Soils — Pt — Peat and other highly organic soils

GROUNDWATER

GW = Groundwater depth (m) or level (RL)
bgl = Below ground level
swl = Standing water level

Appendix D
5 Pages

Plates/Photographs

Limited ESA
1505-1525 Pound Rd, Clyde North

PLATE 1 Site and paddock looking south towards the dwelling.

PLATE 2 Demolished and burnt remains of a shed

PLATE 3 Sheds used for storing miscellaneous household items

PLATE 4 Cattle yard

PLATE 5 Farm dam

PLATE 6 Potential asbestos containing material located near the entrance of the site

PLATE 7 Stockpile, near entrance to the site

PLATE 8 Site, looking north towards the electricity power lines

PLATE 9 Drilling near demolished shed

PLATE 10 Soil core at BH02

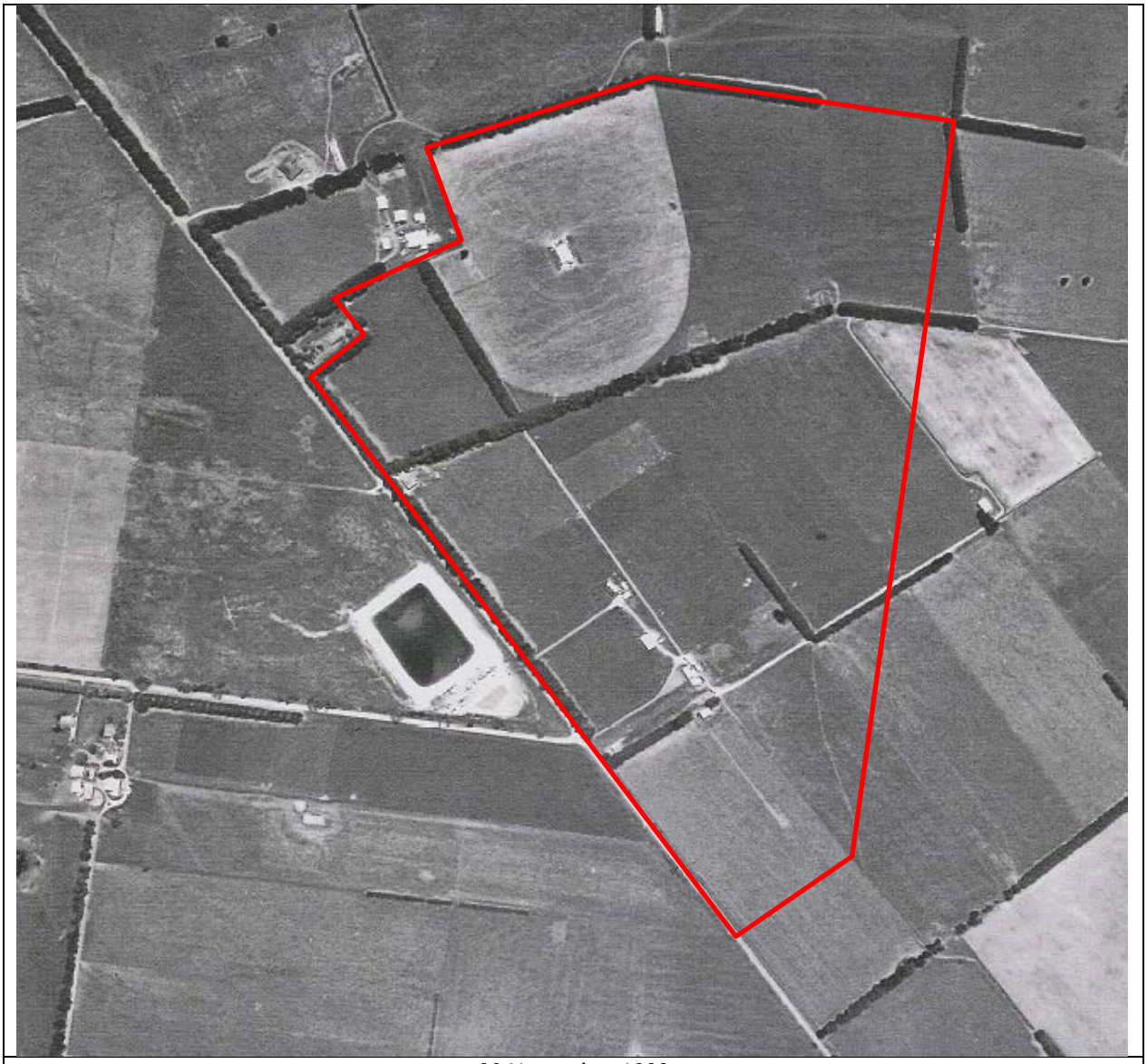
Appendix E
7 Pages

Aerial Photographs

Limited ESA
1505-1525 Pound Rd, Clyde North

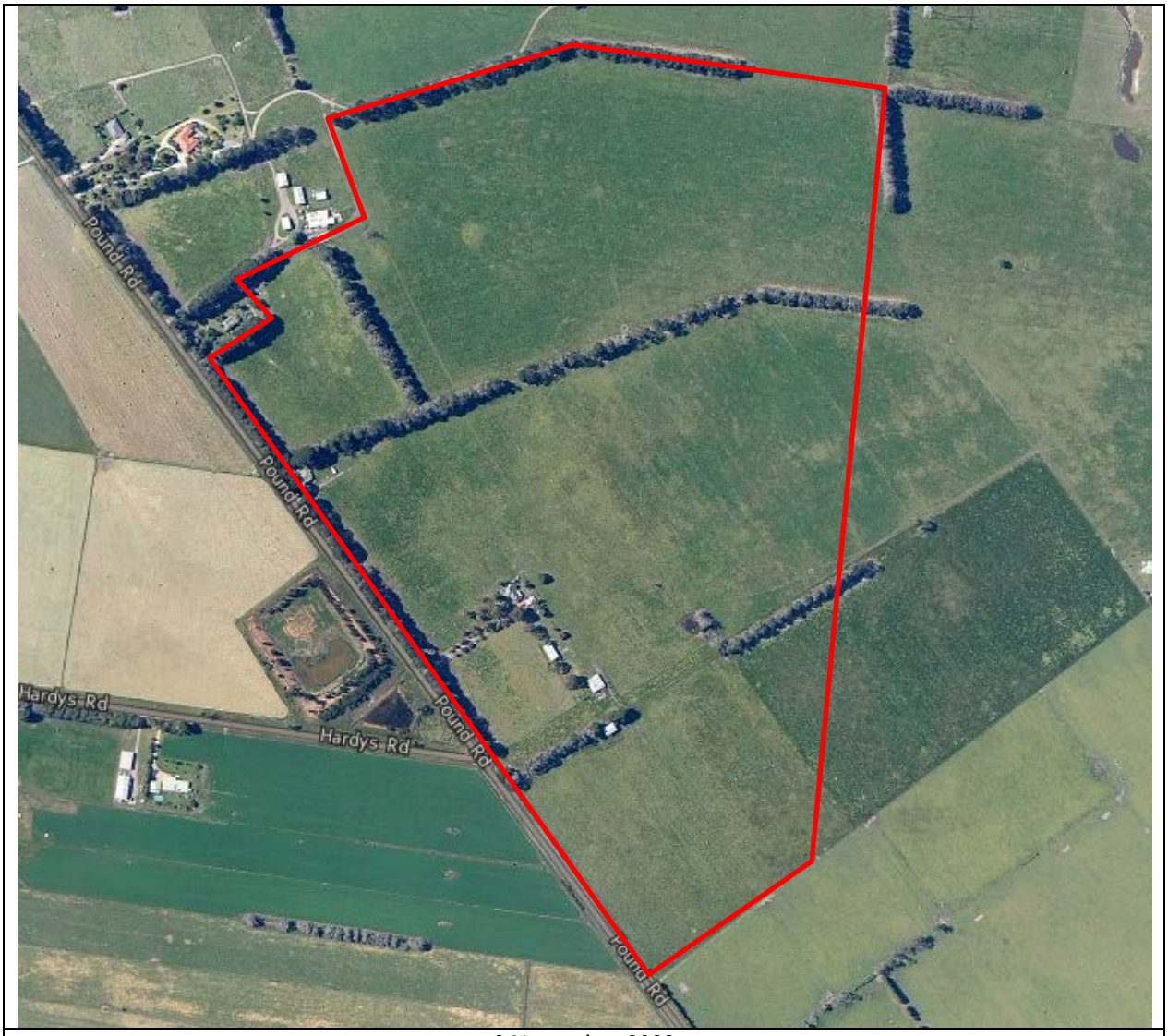
7 January 1960

27 October 1970



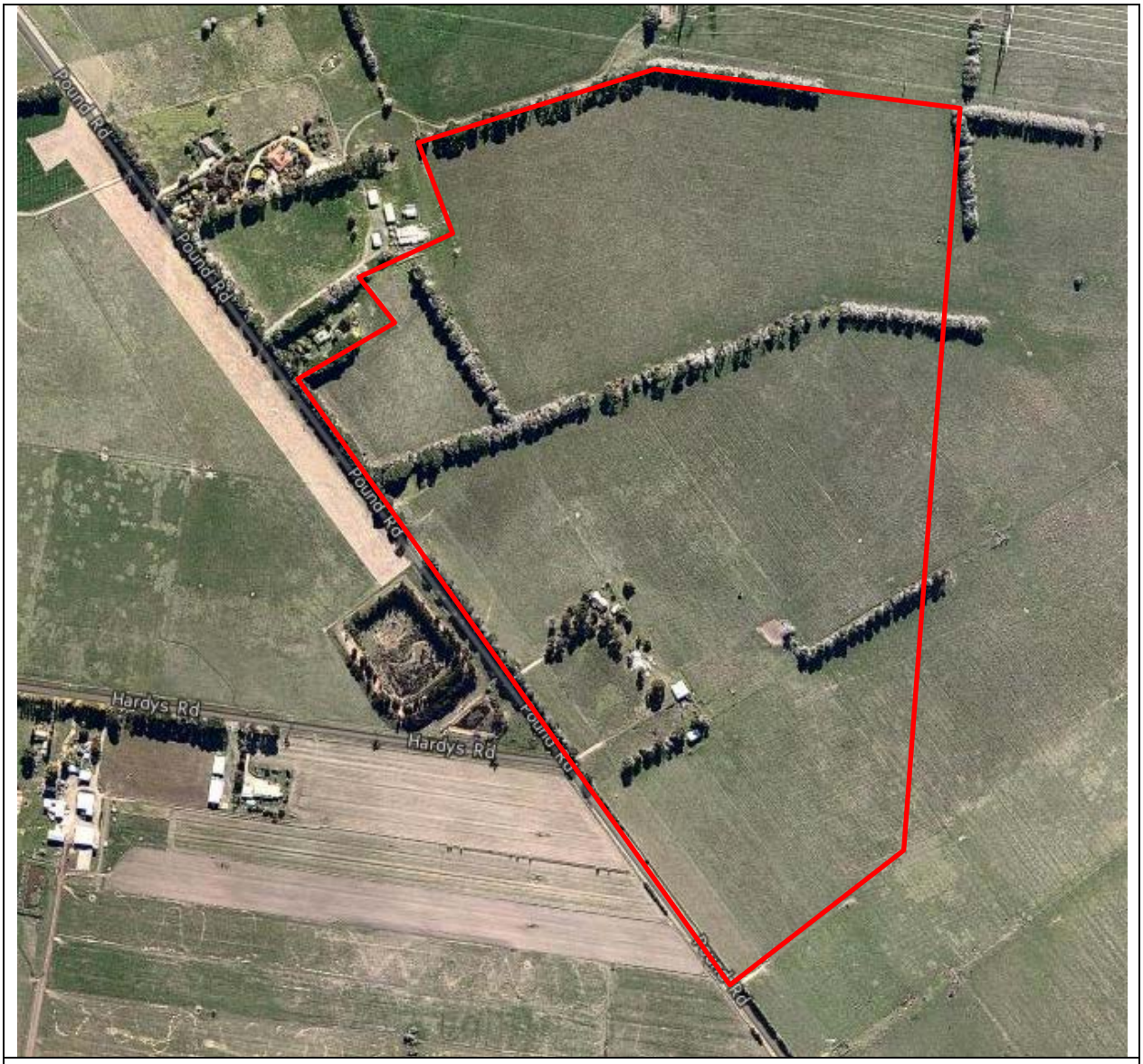
26 November 1980

3 July 1991



6 November 2009

4 October 2012



9 May 2013

Appendix F
28 Pages

Laboratory Reports & Chain of Custody Records

Chain of Custody Records
Laboratory Reports
Data Quality Review

Cardno LanePiper

Chain of Custody

Sheet 1 of 1

PM Name: Srijeeta De

Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0447500007

Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125

PM Email: srijeeta.de@cardno.com.au

Project Number: 213157 Site: 1505 Pound Rd, Clyde North

Laboratory (name, phone,fax no & contact person) MGT

Sample ID	Laboratory ID	Container	Sampling Date	Sampling Time	Sample Matrix: Soil	Sample Matrix: water	Sample preservation: Ice bricks	Analysis: IWRG621	Analysis: B2: TPH, BTEX/Pb	Analysis: HOLD	Analysis: B1 - TPH, BTEX
BH01/0.1		Jar	11/06/2013	8:30					X		
BH01/0.5			11/06/2013						X		
BH01/0.9			11/06/2013							X	
BH02/0.1			11/06/2013					X			
BH02/0.5			11/06/2013						X		
BH02/0.9			11/06/2013							X	
BH03/0.1			11/06/2013						X		
BH03/0.5			11/06/2013						X		
BH03/0.9			11/06/2013							X	
QC1			11/06/2013								X
QC2			11/06/2013	↓	↓					X	
(				10:00			↓				

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples. S.De

Sampler name: (print and signature) Srijeeta De Date: 2:34pm 11/6/13

Relinquished by (Sampler): (print and signature)	Date	Time	Received by (Courier/Lab): (print and signature)	Date	Time
LG	11-6-13	2:45			
Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time
			Catherine	11/6	3:29 pm
Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/3 days/5 days) Please circle

382174

Cardno LanePiper

Chain of Custody

COURIER DONT USE

Sheet 1 of 1

PM Name: Srijeeta De

Phone: 03 9888 0100 **Fax:** 03 9808 3511 **Mobile:** 0447500007

Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125

PM Email: srijeeta.de@cardno.com.au

Project Number: 213157 **Site:** 1505 Pound Rd, Clyde North

Laboratory (name, phone,fax no & contact person) MGT

Sample ID	Laboratory ID	Container	Sampling Date	Sampling Time	Sample Matrix: Soil	Sample Matrix: water	Sample preservation: Ice bricks	Analysis: IWRG621	Analysis: B2: TPH, BTEX/Pb	Analysis: HOLD
BH01/0.1		Jar	11/06/2013	8:30					X	
BH01/0.5			11/06/2013						X	X
BH01/0.9			11/06/2013							X
BH02/0.1			11/06/2013					X		
BH02/0.5			11/06/2013						X	
BH02/0.9			11/06/2013							X
BH03/0.1			11/06/2013						X	
BH03/0.5			11/06/2013						X	
BH03/0.9			11/06/2013							X
QC1			11/06/2013							XX
QC2			11/06/2013							XX
QCA		plastic bottle		10:00		X				X

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples. S.De **Sampler name:** (print and signature) Srijeeta De **Date:** 2:34pm 11/6/13

Relinquished by (Sampler): (print and signature)	Date	Time	Received by (Courier/Lab): (print and signature)	Date	Time
GG.	11.6.13.	2.45			
Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time
Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/3 days/5 days) Please circle

382174

eurofins | mgt

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

Sample Receipt Advice

Company name: **Cardno Lane Piper Pty Ltd**

Contact name: Srijeeta De
Client job number: 1505 POUND RD CLYDE NORTH 213157
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Jun 11, 2013 3:29 PM
Eurofins | mgt reference: **382174**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Organic samples had Teflon liners.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Natalie Krasselt on Phone : (+61) (3) 8564 5000 or by e.mail: NatalieKrasselt@eurofins.com.au

Results will be delivered electronically via e.mail to Srijeeta De - srijeeta.de@lanepiper.com.au.

Eurofins | mgt Sample Receipt

eurofins | mgt

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Cardno Lane Piper Pty Ltd
Building 2, 154 Highbury Road
Burwood
VIC 3125

Attention: **Srijeeta De**

Report **382174-S**
Client Reference 1505 POUND RD CLYDE NORTH 213157
Received Date Jun 11, 2013

Client Sample ID			**BH01/0.1**	**BH01/0.5**	**BH02/0.1**	**BH02/0.5**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M13-Jn07109**	**M13-Jn07110**	**M13-Jn07111**	**M13-Jn07112**
Date Sampled			**Jun 11, 2013**	**Jun 11, 2013**	**Jun 11, 2013**	**Jun 11, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	51	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	51	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
Fluorobenzene (surr.)	1	%	112	109	-	110
Volatile Organics						
1.2.4-Trichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
Hexachlorobutadiene	0.2	mg/kg	-	-	< 0.2	-
1.1-Dichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1-Dichloroethene	0.05	mg/kg	-	-	< 0.05	-
1.1.1-Trichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1.1.2-Tetrachloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1.2-Trichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1.2.2-Tetrachloroethane	0.05	mg/kg	-	-	< 0.05	-
1.2-Dibromoethane	0.05	mg/kg	-	-	< 0.05	-
1.2-Dichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2-Dichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.2-Dichloropropane	0.05	mg/kg	-	-	< 0.05	-
1.2.3-Trichloropropane	0.05	mg/kg	-	-	< 0.05	-
1.2.4-Trimethylbenzene	0.05	mg/kg	-	-	< 0.05	-
1.3-Dichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.3-Dichloropropane	0.05	mg/kg	-	-	< 0.05	-
1.3.5-Trimethylbenzene	0.05	mg/kg	-	-	< 0.05	-
1.4-Dichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
2-Butanone (MEK)	0.05	mg/kg	-	-	< 0.05	-
2-Propanone (Acetone)	0.05	mg/kg	-	-	< 0.05	-
4-Chlorotoluene	0.05	mg/kg	-	-	< 0.05	-
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			BH01/0.1	BH01/0.5	BH02/0.1	BH02/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M13-Jn07109	M13-Jn07110	M13-Jn07111	M13-Jn07112
Date Sampled			Jun 11, 2013	Jun 11, 2013	Jun 11, 2013	Jun 11, 2013
Test/Reference	LOR	Unit				
Volatile Organics						
Allyl chloride	0.05	mg/kg	-	-	< 0.05	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.05	mg/kg	-	-	< 0.05	-
Bromochloromethane	0.05	mg/kg	-	-	< 0.05	-
Bromodichloromethane	0.05	mg/kg	-	-	< 0.05	-
Bromoform	0.05	mg/kg	-	-	< 0.05	-
Bromomethane	0.05	mg/kg	-	-	< 0.05	-
Carbon disulfide	0.05	mg/kg	-	-	< 0.05	-
Carbon Tetrachloride	0.05	mg/kg	-	-	< 0.05	-
Chlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Chloroethane	0.05	mg/kg	-	-	< 0.05	-
Chloroform	0.05	mg/kg	-	-	< 0.05	-
Chloromethane	0.05	mg/kg	-	-	< 0.05	-
cis-1.2-Dichloroethene	0.05	mg/kg	-	-	< 0.05	-
cis-1.3-Dichloropropene	0.05	mg/kg	-	-	< 0.05	-
Dibromochloromethane	0.05	mg/kg	-	-	< 0.05	-
Dibromomethane	0.05	mg/kg	-	-	< 0.05	-
Dichlorodifluoromethane	0.05	mg/kg	-	-	< 0.05	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.05	mg/kg	-	-	< 0.05	-
Isopropyl benzene (Cumene)	0.05	mg/kg	-	-	< 0.05	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.05	mg/kg	-	-	< 0.05	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.05	mg/kg	-	-	< 0.05	-
Tetrachloroethene	0.05	mg/kg	-	-	< 0.05	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.05	mg/kg	-	-	< 0.05	-
trans-1.3-Dichloropropene	0.05	mg/kg	-	-	< 0.05	-
Trichloroethene	0.05	mg/kg	-	-	< 0.05	-
Trichlorofluoromethane	0.05	mg/kg	-	-	< 0.05	-
Vinyl chloride	0.05	mg/kg	-	-	< 0.05	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	84	-
4-Bromofluorobenzene (surr.)	1	%	-	-	81	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
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	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	BH01/0.1 Soil M13-Jn07109 Jun 11, 2013	BH01/0.5 Soil M13-Jn07110 Jun 11, 2013	BH02/0.1 Soil M13-Jn07111 Jun 11, 2013	BH02/0.5 Soil M13-Jn07112 Jun 11, 2013
Polycyclic Aromatic Hydrocarbons						
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	-
p-Terphenyl-d14 (surr.)	1	%	-	-	62	-
2-Fluorobiphenyl (surr.)	1	%	-	-	93	-
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
Chlordane	0.1	mg/kg	-	-	< 0.1	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	120	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	89	-
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	-
Dibutylchlorendate (surr.)	1	%	-	-	120	-

Client Sample ID			BH01/0.1	BH01/0.5	BH02/0.1	BH02/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M13-Jn07109	M13-Jn07110	M13-Jn07111	M13-Jn07112
Date Sampled			Jun 11, 2013	Jun 11, 2013	Jun 11, 2013	Jun 11, 2013
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Tetrachloro-m-xylene (surr.)	1	%	-	-	89	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1.0	mg/kg	-	-	< 1	-
2.4.6-Trichlorophenol	1.0	mg/kg	-	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1.0	mg/kg	-	-	< 1	-
Pentachlorophenol	1.0	mg/kg	-	-	< 1	-
Tetrachlorophenols - Total	1.0	mg/kg	-	-	< 1	-
Total Halogenated Phenol	1	mg/kg	-	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
2-Nitrophenol	1.0	mg/kg	-	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
Dinoseb	20	mg/kg	-	-	< 20	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Total Non-Halogenated Phenol	20	mg/kg	-	-	< 20	-
Phenol-d6 (surr.)	1	%	-	-	99	-
Chromium (hexavalent)	1	mg/kg	-	-	< 1	-
Cyanide (total)	5	mg/kg	-	-	< 5	-
Fluoride	100	mg/kg	-	-	< 100	-
pH (1:5 Aqueous extract)	0.1	units	-	-	5.8	-
% Moisture	0.1	%	11	8.7	8.5	8.1
Heavy Metals						
Arsenic	2	mg/kg	-	-	< 2	-
Cadmium	0.4	mg/kg	-	-	< 0.4	-
Chromium	5	mg/kg	-	-	5.9	-
Copper	5	mg/kg	-	-	< 5	-
Lead	5	mg/kg	26	< 5	8.1	16
Mercury	0.1	mg/kg	-	-	< 0.1	-
Molybdenum	10	mg/kg	-	-	< 10	-
Nickel	5	mg/kg	-	-	< 5	-
Selenium	2	mg/kg	-	-	< 2	-
Silver	5	mg/kg	-	-	< 5	-
Tin	10	mg/kg	-	-	< 10	-
Zinc	5	mg/kg	-	-	26	-

Client Sample ID			BH03/0.1	BH03/0.5	QC1
Sample Matrix			Soil	Soil	Soil
Eurofins | mgt Sample No.			M13-Jn07113	M13-Jn07114	M13-Jn07115
Date Sampled			Jun 11, 2013	Jun 11, 2013	Jun 11, 2013
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3
Fluorobenzene (surr.)	1	%	106	108	110
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
% Moisture	0.1	%	6.5	6.5	6.8
Heavy Metals					
Lead	5	mg/kg	12	< 5	-

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 (regarding both quality and NATA accreditation).

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite 2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jun 12, 2013	14 Day
- Method: TRH C6-C36 - MGT 100A			
BTEX	Melbourne	Jun 12, 2013	14 Day
- Method: USEPA 8260 - MGT 350A Monocyclic Aromatic Hydrocarbons and MGT 100A			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 12, 2013	14 Day
- Method: LM-LTM-ORG2010			
Heavy Metals	Melbourne	Jun 13, 2013	180 Day
- Method: USEPA 6010/6020 Heavy Metals			
IWRG 621 Metals : Metals M12	Melbourne	Jun 13, 2013	28 Day
- Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury			
Vic EPA IWRG 621 (Solids)			
Volatile Organics	Melbourne	Jun 12, 2013	7 Day
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jun 12, 2013	14 Day
- Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons			
Organochlorine Pesticides	Melbourne	Jun 12, 2013	14 Day
- Method: USEPA 8081 Organochlorine Pesticides			
Polychlorinated Biphenyls	Melbourne	Jun 12, 2013	28 Day
- Method: USEPA 8082 Polychlorinated Biphenyls			
Phenols (Halogenated)	Melbourne	Jun 12, 2013	14 Day
- Method: USEPA 8270 Phenols			
Phenols (non-Halogenated)	Melbourne	Jun 12, 2013	14 Day
- Method: USEPA 8270 Phenols			
Chromium (hexavalent)	Melbourne	Jun 12, 2013	28 Day
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Cyanide (total)	Melbourne	Jun 13, 2013	14 Day
- Method: USEPA 9010 Cyanide			
Fluoride	Melbourne	Jun 14, 2013	28 Day
- Method: NEPC 404 (Fusion followed by ISE)			
pH (1:5 Aqueous extract)	Melbourne	Jun 13, 2013	7 Day
- Method: APHA 4500 pH by Direct Measurement			
% Moisture	Melbourne	Jun 12, 2013	14 Day
- Method: Method 102 - ANZECC - % Moisture			

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

ABN : 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Eurofins | mgt 2-5 Kingston Town Close, Oakleigh, Victoria, Australia, 3166
ABN : 50 005 085 521 Telephone: +61 3 8564 5000 Facsimile: +61 3 8564 5090

Company Name:	Cardno Lane Piper Pty Ltd	**Order No.:**	
Address:	Building 2, 154 Highbury Road	**Report #:**	382174
	Burwood	**Phone:**	9888 0100
	VIC 3125	**Fax:**	9808 3511
Client Job No.:	1505 POUND RD CLYDE NORTH 213157		

Received:	Jun 11, 2013 3:29 PM
Due:	Jun 18, 2013
Priority:	5 Day
Contact Name:	Srijeeta De

Eurofins | mgt Client Manager: Natalie Krasselt

Sample Detail	% Moisture	HOLD	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite 1	Eurofins | mgt Suite 2
Laboratory where analysis is conducted					
Melbourne Laboratory - NATA Site # 1254 & 14271	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217					
Brisbane Laboratory - NATA Site # 20794					
External Laboratory					

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
H01/0.1	Jun 11, 2013	8:30AM	Soil	M13-Jn07109	X				X
H01/0.5	Jun 11, 2013	8:30AM	Soil	M13-Jn07110	X				X
H02/0.1	Jun 11, 2013	8:30AM	Soil	M13-Jn07111	X		X		
H02/0.5	Jun 11, 2013	8:30AM	Soil	M13-Jn07112	X				X
H03/0.1	Jun 11, 2013	8:30AM	Soil	M13-Jn07113	X				X
H03/0.5	Jun 11, 2013	8:30AM	Soil	M13-Jn07114	X				X
C1	Jun 11, 2013	8:30AM	Soil	M13-Jn07115	X			X	
H01/0.9	Jun 11, 2013	8:30AM	Soil	M13-Jn07116		X			
H02/0.9	Jun 11, 2013	8:30AM	Soil	M13-Jn07117		X			
H03/0.9	Jun 11, 2013	8:30AM	Soil	M13-Jn07118		X			

Date Reported:Jun 17, 2013

eurofins | mgt

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

web : www.mgtlabmark.com.au
e.mail : enviro@mgtlabmark.com.au
ABN : 50 005 085 521

Company Name:	Cardno Lane Piper Pty Ltd	**Order No.:**	
Address:	Building 2, 154 Highbury Road Burwood VIC 3125	**Report #:** **Phone:** **Fax:**	382174 9888 0100 9808 3511
Client Job No.:	1505 POUND RD CLYDE NORTH 213157		

Received:	Jun 11, 2013 3:29 PM
Due:	Jun 18, 2013
Priority:	5 Day
Contact Name:	Srijeeta De

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Sample Detail					% Moisture	HOLD	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite 1	Eurofins | mgt Suite 2
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794									
External Laboratory									
C2		Jun 11, 2013	8:30AM	Soil	M13-Jn07119		X		

Date Reported:Jun 17, 2013

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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 Sample Receipt Acknowledgment.

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.

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

UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

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

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Units

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. 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.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	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

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 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. 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.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. 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.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
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 USEPA 8260 - MGT 350A Monocyclic Aromatic Hydrocarbons and MGT 100A							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by GCMS							
1.2.4-Trichlorobenzene	mg/kg	< 0.2			0.2	Pass	
Hexachlorobutadiene	mg/kg	< 0.2			0.2	Pass	
1.1-Dichloroethane	mg/kg	< 0.05			0.05	Pass	
1.1-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05			0.05	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05			0.05	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05			0.05	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05			0.05	Pass	
1.2-Dibromoethane	mg/kg	< 0.05			0.05	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.2-Dichloroethane	mg/kg	< 0.05			0.05	Pass	
1.2-Dichloropropane	mg/kg	< 0.05			0.05	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05			0.05	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05			0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.3-Dichloropropane	mg/kg	< 0.05			0.05	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05			0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05			0.05	Pass	
2-Butanone (MEK)	mg/kg	< 0.05			0.05	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05			0.05	Pass	
4-Chlorotoluene	mg/kg	< 0.05			0.05	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05			0.05	Pass	
Allyl chloride	mg/kg	< 0.05			0.05	Pass	
Bromobenzene	mg/kg	< 0.05			0.05	Pass	
Bromochloromethane	mg/kg	< 0.05			0.05	Pass	
Bromodichloromethane	mg/kg	< 0.05			0.05	Pass	
Bromoform	mg/kg	< 0.05			0.05	Pass	
Bromomethane	mg/kg	< 0.05			0.05	Pass	
Carbon disulfide	mg/kg	< 0.05			0.05	Pass	
Carbon Tetrachloride	mg/kg	< 0.05			0.05	Pass	
Chlorobenzene	mg/kg	< 0.05			0.05	Pass	
Chloroethane	mg/kg	< 0.05			0.05	Pass	
Chloroform	mg/kg	< 0.05			0.05	Pass	
Chloromethane	mg/kg	< 0.05			0.05	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromochloromethane	mg/kg	< 0.05			0.05	Pass	
Dibromomethane	mg/kg	< 0.05			0.05	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05			0.05	Pass	
Iodomethane	mg/kg	< 0.05			0.05	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05			0.05	Pass	
Methylene Chloride	mg/kg	< 0.05			0.05	Pass	
Styrene	mg/kg	< 0.05			0.05	Pass	
Tetrachloroethene	mg/kg	< 0.05			0.05	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.05			0.05	Pass	
Trichloroethene	mg/kg	< 0.05			0.05	Pass	
Trichlorofluoromethane	mg/kg	< 0.05			0.05	Pass	
Vinyl chloride	mg/kg	< 0.05			0.05	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions LM-LTM-ORG2010							
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 USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides USEPA 8081 Organochlorine Pesticides							
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	
Chlordane	mg/kg	< 0.1			0.1	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 0.1			0.1	Pass	
Method Blank							
Polychlorinated Biphenyls USEPA 8082 Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated) USEPA 8270 Phenols							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1.0	Pass	
Pentachlorophenol	mg/kg	< 1			1.0	Pass	
Tetrachlorophenols - Total	mg/kg	< 1			1.0	Pass	
Method Blank							
Phenols (non-Halogenated) USEPA 8270 Phenols							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride	mg/kg	< 100			100	Pass	
Method Blank							
IWRG 621 Metals : Metals M12 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 5			5	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	111			70-130	Pass	
LCS - % Recovery							
BTEX USEPA 8260 - MGT 350A Monocyclic Aromatic Hydrocarbons and MGT 100A							
Benzene	%	104			70-130	Pass	
Toluene	%	91			70-130	Pass	
Ethylbenzene	%	92			70-130	Pass	
m&p-Xylenes	%	91			70-130	Pass	
Xylenes - Total	%	91			70-130	Pass	
LCS - % Recovery							
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by GCMS							
1.1-Dichloroethene	%	91			70-130	Pass	
1.1.1-Trichloroethane	%	83			70-130	Pass	
1.2-Dichloroethane	%	83			70-130	Pass	
Carbon Tetrachloride	%	79			70-130	Pass	
Trichloroethene	%	86			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions LM-LTM-ORG2010							
TRH C6-C10	%	93			70-130	Pass	
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	101			70-130	Pass	
Acenaphthylene	%	103			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	103			70-130	Pass	
Benzo(a)pyrene	%	114			70-130	Pass	
Benzo(b&j)fluoranthene	%	100			70-130	Pass	
Benzo(g.h.i)perylene	%	75			70-130	Pass	
Benzo(k)fluoranthene	%	96			70-130	Pass	
Chrysene	%	99			70-130	Pass	
Dibenz(a.h)anthracene	%	81			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	90			70-130	Pass	
Naphthalene	%	96			70-130	Pass	
Phenanthrene	%	104			70-130	Pass	
Pyrene	%	99			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides USEPA 8081 Organochlorine Pesticides							
4.4'-DDD	%	106			70-130	Pass	
4.4'-DDE	%	98			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-BHC	%	77			70-130	Pass	
Aldrin	%	100			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-BHC	%	83			70-130	Pass	
d-BHC	%	89			70-130	Pass	
Dieldrin	%	102			70-130	Pass	
Endosulfan I	%	100			70-130	Pass	
Endosulfan II	%	100			70-130	Pass	
Endosulfan sulphate	%	105			70-130	Pass	
Endrin	%	97			70-130	Pass	
Endrin aldehyde	%	97			70-130	Pass	
Endrin ketone	%	105			70-130	Pass	
g-BHC (Lindane)	%	85			70-130	Pass	
Heptachlor	%	86			70-130	Pass	
Heptachlor epoxide	%	100			70-130	Pass	
Hexachlorobenzene	%	76			70-130	Pass	
Methoxychlor	%	94			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls USEPA 8082 Polychlorinated Biphenyls							
Aroclor-1260	%	111			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated) USEPA 8270 Phenols							
2-Chlorophenol	%	103			30-130	Pass	
2.4-Dichlorophenol	%	97			30-130	Pass	
2.4.5-Trichlorophenol	%	98			30-130	Pass	
2.4.6-Trichlorophenol	%	119			30-130	Pass	
2.6-Dichlorophenol	%	105			30-130	Pass	
4-Chloro-3-methylphenol	%	99			30-130	Pass	
Pentachlorophenol	%	85			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated) USEPA 8270 Phenols							
2-Cyclohexyl-4.6-dinitrophenol	%	109			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	60			30-130	Pass	
2-Methylphenol (o-Cresol)	%	106			30-130	Pass	
2-Nitrophenol	%	93			30-130	Pass	
2.4-Dimethylphenol	%	74			30-130	Pass	
2.4-Dinitrophenol	%	53			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	107			30-130	Pass	
4-Nitrophenol	%	88			30-130	Pass	
Phenol	%	100			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	102			70-130	Pass	
Cyanide (total)	%	97			70-130	Pass	
Fluoride	%	86			70-130	Pass	
LCS - % Recovery							
IWRG 621 Metals : Metals M12 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury							
Arsenic	%	80			80-120	Pass	
Cadmium	%	82			80-120	Pass	
Chromium	%	85			80-120	Pass	
Copper	%	85			80-120	Pass	
Lead	%	87			80-120	Pass	
Mercury	%	102			75-125	Pass	
Molybdenum	%	83			80-120	Pass	
Nickel	%	86			80-120	Pass	
Selenium	%	93			80-120	Pass	
Silver	%	107			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tin			%	117			80-120	Pass	
Zinc			%	93			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M13-Jn07109	CP	%	96			70-130	Pass	
TRH C10-C14	M13-Jn07109	CP	%	101			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M13-Jn07109	CP	%	104			70-130	Pass	
Toluene	M13-Jn07109	CP	%	95			70-130	Pass	
Ethylbenzene	M13-Jn07109	CP	%	94			70-130	Pass	
o-Xylene	M13-Jn07109	CP	%	94			70-130	Pass	
m&p-Xylenes	M13-Jn07109	CP	%	95			70-130	Pass	
Xylenes - Total	M13-Jn07109	CP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	M13-Jn07109	CP	%	96			70-130	Pass	
TRH >C10-C16	M13-Jn07109	CP	%	99			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	M13-Jn07109	CP	%	75			75-125	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M13-Jn05087	NCP	%	94			70-130	Pass	
1.1.1-Trichloroethane	M13-Jn05087	NCP	%	82			70-130	Pass	
1.2-Dichlorobenzene	M13-Jn05087	NCP	%	89			70-130	Pass	
1.2-Dichloroethane	M13-Jn05087	NCP	%	79			70-130	Pass	
Carbon Tetrachloride	M13-Jn05087	NCP	%	78			70-130	Pass	
Trichloroethene	M13-Jn05087	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M13-Jn07111	CP	%	94			70-130	Pass	
Acenaphthylene	M13-Jn07111	CP	%	95			70-130	Pass	
Anthracene	M13-Jn07111	CP	%	99			70-130	Pass	
Benz(a)anthracene	M13-Jn07111	CP	%	94			70-130	Pass	
Benzo(a)pyrene	M13-Jn07111	CP	%	99			70-130	Pass	
Benzo(b&j)fluoranthene	M13-Jn07111	CP	%	95			70-130	Pass	
Benzo(g.h.i)perylene	M13-Jn07111	CP	%	72			70-130	Pass	
Benzo(k)fluoranthene	M13-Jn07111	CP	%	92			70-130	Pass	
Chrysene	M13-Jn07111	CP	%	88			70-130	Pass	
Dibenz(a.h)anthracene	M13-Jn07111	CP	%	73			70-130	Pass	
Fluoranthene	M13-Jn07111	CP	%	93			70-130	Pass	
Fluorene	M13-Jn07111	CP	%	94			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M13-Jn07111	CP	%	75			70-130	Pass	
Naphthalene	M13-Jn07111	CP	%	87			70-130	Pass	
Phenanthrene	M13-Jn07111	CP	%	97			70-130	Pass	
Pyrene	M13-Jn07111	CP	%	88			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDD	M13-Jn06100	NCP	%	111			70-130	Pass	
4.4'-DDE	M13-Jn06100	NCP	%	100			70-130	Pass	
4.4'-DDT	M13-Jn06100	NCP	%	92			70-130	Pass	
a-BHC	M13-Jn06100	NCP	%	77			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	M13-Jn06100	NCP	%	102			70-130	Pass	
b-BHC	M13-Jn06100	NCP	%	94			70-130	Pass	
d-BHC	M13-Jn06100	NCP	%	89			70-130	Pass	
Dieldrin	M13-Jn06100	NCP	%	104			70-130	Pass	
Endosulfan I	M13-Jn06100	NCP	%	102			70-130	Pass	
Endosulfan II	M13-Jn06100	NCP	%	103			70-130	Pass	
Endosulfan sulphate	M13-Jn06100	NCP	%	112			70-130	Pass	
Endrin	M13-Jn06100	NCP	%	99			70-130	Pass	
Endrin aldehyde	M13-Jn06100	NCP	%	102			70-130	Pass	
Endrin ketone	M13-Jn06100	NCP	%	114			70-130	Pass	
g-BHC (Lindane)	M13-Jn06100	NCP	%	85			70-130	Pass	
Heptachlor	M13-Jn06100	NCP	%	86			70-130	Pass	
Heptachlor epoxide	M13-Jn06100	NCP	%	102			70-130	Pass	
Hexachlorobenzene	M13-Jn06100	NCP	%	77			70-130	Pass	
Methoxychlor	M13-Jn06100	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M13-Jn06100	NCP	%	127			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M13-Jn07111	CP	%	97			30-130	Pass	
2.4-Dichlorophenol	M13-Jn07111	CP	%	89			30-130	Pass	
2.4.5-Trichlorophenol	M13-Jn07111	CP	%	100			30-130	Pass	
2.4.6-Trichlorophenol	M13-Jn07111	CP	%	108			30-130	Pass	
2.6-Dichlorophenol	M13-Jn07111	CP	%	101			30-130	Pass	
4-Chloro-3-methylphenol	M13-Jn07111	CP	%	92			30-130	Pass	
Pentachlorophenol	M13-Jn07111	CP	%	99			30-130	Pass	
Tetrachlorophenols - Total	M13-Jn07111	CP	%	98			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M13-Jn07111	CP	%	107			30-130	Pass	
2-Methyl-4.6-dinitrophenol	M13-Jn07111	CP	%	76			30-130	Pass	
2-Methylphenol (o-Cresol)	M13-Jn07111	CP	%	95			30-130	Pass	
2-Nitrophenol	M13-Jn07111	CP	%	94			30-130	Pass	
2.4-Dimethylphenol	M13-Jn07111	CP	%	107			30-130	Pass	
2.4-Dinitrophenol	M13-Jn07111	CP	%	121			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M13-Jn07111	CP	%	99			30-130	Pass	
4-Nitrophenol	M13-Jn07111	CP	%	82			30-130	Pass	
Dinoseb	M13-Jn07111	CP	%	81			30-130	Pass	
Phenol	M13-Jn07111	CP	%	98			30-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M13-Jn07222	NCP	%	84			70-130	Pass	
Cyanide (total)	M13-Jn07111	CP	%	79			70-130	Pass	
Fluoride	M13-Jn07111	CP	%	79			70-130	Pass	
Spike - % Recovery									
IWRG 621 Metals : Metals M12				Result 1					
Arsenic	M13-Jn07111	CP	%	88			75-125	Pass	
Cadmium	M13-Jn07111	CP	%	88			75-125	Pass	
Chromium	M13-Jn07111	CP	%	90			75-125	Pass	
Copper	M13-Jn07111	CP	%	97			75-125	Pass	
Lead	M13-Jn07111	CP	%	88			75-125	Pass	
Mercury	M13-Jn07111	CP	%	100			70-130	Pass	
Molybdenum	M13-Jn07111	CP	%	91			75-125	Pass	
Nickel	M13-Jn07111	CP	%	90			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Selenium	M13-Jn07111	CP	%	82			75-125	Pass	
Silver	M13-Jn07111	CP	%	89			75-125	Pass	
Tin	M13-Jn07111	CP	%	80			75-125	Pass	
Zinc	M13-Jn07111	CP	%	95			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M13-Jn07109	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M13-Jn07109	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M13-Jn07109	CP	mg/kg	51	61	17	30%	Pass	
TRH C29-C36	M13-Jn07109	CP	mg/kg	< 50	54	17	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M13-Jn07109	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M13-Jn07109	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M13-Jn07109	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
o-Xylene	M13-Jn07109	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M13-Jn07109	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Xylenes - Total	M13-Jn07109	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M13-Jn07109	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M13-Jn07109	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M13-Jn07109	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M13-Jn07109	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M13-Jn07109	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	M13-Jn07109	CP	mg/kg	26	24	10	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2.4-Trichlorobenzene	M13-Jn05087	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Hexachlorobutadiene	M13-Jn05087	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
1.1-Dichloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1-Dichloroethene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1-Trichloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2-Trichloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dibromoethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichlorobenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloropropane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.3-Trichloropropane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4-Trimethylbenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichlorobenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichloropropane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3.5-Trimethylbenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Butanone (MEK)	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Propanone (Acetone)	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Chlorotoluene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Allyl chloride	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Bromobenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromochloromethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromodichloromethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromoform	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromomethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon disulfide	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon Tetrachloride	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlorobenzene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroform	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloromethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.2-Dichloroethene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.3-Dichloropropene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromochloromethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromomethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dichlorodifluoromethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Iodomethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Isopropyl benzene (Cumene)	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methylene Chloride	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Styrene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Tetrachloroethene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1.2-Dichloroethene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1.3-Dichloropropene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichloroethene	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichlorofluoromethane	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Vinyl chloride	M13-Jn05087	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
4.4'-DDD	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlordane	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
d-BHC	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Dieldrin	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M13-Jn06100	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB	M13-Jn06100	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M13-Jn07111	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M13-Jn07111	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M13-Jn07111	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M13-Jn07111	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M13-Jn07111	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M13-Jn07111	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M13-Jn07111	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	M13-Jn07111	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M13-Jn07111	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M13-Jn07111	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M13-Jn07111	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M13-Jn05644	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Fluoride	M13-Jn07111	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
IWRG 621 Metals : Metals M12				Result 1	Result 2	RPD			
Arsenic	M13-Jn07111	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	M13-Jn07111	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	

Duplicate									
IWRG 621 Metals : Metals M12				Result 1	Result 2	RPD			
Chromium	M13-Jn07111	CP	mg/kg	5.9	5.8	2.0	30%	Pass	
Copper	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M13-Jn07111	CP	mg/kg	8.1	5.6	36	30%	Fail	Q15
Mercury	M13-Jn07111	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M13-Jn07111	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Nickel	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M13-Jn07111	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M13-Jn07111	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Tin	M13-Jn07111	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M13-Jn07111	CP	mg/kg	26	24	9.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins | mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Natalie Krasselt	Client Services
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Stacey Jenkins	Senior Analyst-Organic (VIC)

Glenn Jackson

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

TERMS AND CONDITIONS

1. GENERAL

1.1. All Services to be provided by Eurofins Environment Testing Australia Pty Ltd (trading as Eurofins | mgt) will be governed by these Terms and Conditions (Terms) as varied by any special terms agreed to by Eurofins | mgt in writing (Special Terms).

1.2. No order for Services or any Special Terms relating to that order will be deemed to have been accepted by Eurofins | mgt unless Eurofins | mgt has confirmed acceptance of the order or the Special Terms in writing. In these Terms "in writing" means any confirmation by Eurofins | mgt in writing delivered personally or sent by post, facsimile or email.

1.3. These Terms will prevail over any other terms unless Eurofins | mgt specifically confirms acceptance of Special Terms in writing. Unless otherwise agreed to by Eurofins | mgt in writing any Special Terms shall apply only to that specific order.

2. SERVICES

2.1. In these Terms "Services" means food, or pharmaceutical product testing, environmental sampling and environmental laboratory testing or audit and assurance services that Eurofins | mgt agrees to provide to the Customer in writing.

2.2. Eurofins | mgt will provide the Services using reasonable care and skill, adopting such methods as Eurofins | mgt considers appropriate and in accordance with any Special Terms agreed to by Eurofins | mgt in writing.

2.3. The Services will be undertaken in the time period agreed to between Eurofins | mgt and the Customer and in the absence of agreement within a reasonable time. Eurofins | mgt will not be liable for any delay in providing the Services.

2.4. Unless sampling is conducted by Eurofins | mgt personnel any reports issued by Eurofins | mgt relate exclusively to the samples provided by the Customer and do not relate to the lot from which samples have been obtained.

2.5. Where Eurofins | mgt has agreed to provide audit and assurance services, the audit report issued by Eurofins | mgt shall relate only to the scope of services agreed to in writing by Eurofins | mgt (either in the quotation, the engagement letter or an agency agreement).

2.6. Eurofins | mgt may delegate the performance of part or all of the Services to a third party and the Customer authorises the release of all information necessary to the third party for the provision of the Services.

2.7. Any reports provided by Eurofins | mgt can only be relied upon by the party to whom the report is addressed and cannot be relied on by any other party. By providing the Services (and any reports) Eurofins | mgt will not be deemed to have assumed any obligation or liability that the Customer has to a third party.

3. OBLIGATIONS OF THE CUSTOMER

3.1. To enable Eurofins | mgt to provide the Services, the Customer will:

(a) ensure that adequate quantities of the samples and materials are provided in a safe condition. Eurofins | mgt may (at the Customer's cost) undertake initial tests on the samples, material or the site to ensure that it is safe and appropriate for Eurofins | mgt to provide the Services;

(b) ensure that sufficient information instructions and documentation is provided;

(c) where appropriate provide safe and secure access to a site where a Eurofins | mgt representatives attends to collect samples or other customer related items.

(d) ensure that all necessary measures are taken to ensure safety in the performance of the Services including (without limitation) complying with all regulations relating to labelling, transportation of the samples and materials, access to the sites, treatment of hazardous materials;

(e) inform Eurofins | mgt in advance of any hazard or danger, actual or potential associated with any samples or testing;

(f) immediately inform Eurofins | mgt of any change that could affect the provision of the Services or the safety of its personnel.

4. FEES AND PAYMENT

4.1. The Customer will pay the fees agreed between the Customer and Eurofins | mgt for the Services. If the parties have not agreed on the fee payable for the Services then the Customer will pay Eurofins | mgt standard fees for the provision of the Services.

4.2. Fees plus GST will be paid by the Customer.

4.3. Unless otherwise agreed in writing all fees quoted are exclusive of all expenses such as travelling costs and any disbursements incurred on behalf of the Customer.

4.4. The fees will be paid 30 days from the date of the tax invoice for the Services by Eurofins | mgt.

4.5. The Customer has 30 days from the date of the invoice to dispute any items charged within the Invoice.

4.6. Fees will be paid without deduction, set off or counter claim and the Customer cannot retain or defer payment on account of any dispute with Eurofins | mgt.

4.7. If the Customer fails to pay any fees when due, Eurofins | mgt may:

(a) charge an administration charge at the rate of 2% per month calculated on a daily basis for any fees or part of fees outstanding at the due date for payment;
(b) commence proceedings for the collection of unpaid fees and the Customer will be liable for all costs incurred by Eurofins | mgt (including all legal costs on a solicitor client basis);
(c) withhold the release of any reports until all fees have been paid in full by the Customer;
(d) require that part or all of the fees be paid in advance of providing the Services;
(e) cease providing the Services to the Customer without notice.

4.8. In the event that any unforeseen circumstances or expenses arise in undertaking the Services, Eurofins | mgt will endeavour to inform the Customer of any additional costs incurred by Eurofins | mgt and unless the Customer advises Eurofins | mgt not to undertake any further works, the Customer will be responsible for the additional costs.

5. SAMPLES

5.1. Upon receipt of the samples all samples become the property of Eurofins | mgt to the extent necessary for the performance of the Services.

5.2. Eurofins | mgt will store soil samples for a period of 3 months and water samples for a period of 2 weeks after the analysis of the samples is completed. At which time Eurofins | mgt may destroy or otherwise dispose of the samples or return the samples to the Customer. At our discretion Eurofins | mgt may pass onto the Customer those disposal costs in all respects.

5.3. At Eurofins | mgt's discretion all samples received by Eurofins | mgt and not requested for analysis and require "Hold" and storage will be charged to the customer at a cost of $2.00 per sample. This cost will be reimbursed to the Customer if analysis is subsequently requested on the sample within the storage period described in 5.2.

5.4. At Eurofins | mgt's discretion all samples requested by the Customer for storage beyond the period described in 5.2 will be stored for the agreed period in accordance with industry practice at a charge of $2.00 per sample container per week.

5.5. At Eurofins | mgt's discretion all sample containers provided to the customer prior to sampling and not returned to Eurofins | mgt for analysis will be charged at $2.00 per sample container.

5.6. At Eurofins | mgt's discretion all Eskies (Cooler Boxes) not returned to Eurofins | mgt will be charged at $100.00 per item.

5.7. Except where sampling is conducted by Eurofins | mgt personnel the Customer acknowledges and accepts that:

(a) it is solely responsible for the sampling process and warrants that the sample provided to Eurofins | mgt is representative of the lot from which the samples were drawn; and

(b) Eurofins | mgt expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the sample.

6. TITLE TO PROPERTY AND REPORTS

6.1. Eurofins | mgt will retain title to any analysis, results, reports or software produced by Eurofins | mgt until all fees have been paid by the Customer.

6.2. Eurofins | mgt will be entitled to store, use, publish or otherwise deal with all analysis, results, reports, or software so long as Eurofins | mgt does not identify the Customer, except where required by law.

6.3. All intellectual property rights created in the course of the provision of the Services by Eurofins | mgt pursuant to this agreement will vest in Eurofins | mgt immediately upon creation. If required by Eurofins | mgt, the Customer will execute all documents and do all acts and things required to enable the rights to vest in Eurofins | mgt.

6.4. Any report provided by Eurofins | mgt and the copyright contained therein shall be and remain the property of Eurofins | mgt and the Customer shall not alter or misrepresent the contents of such documents in any way. The Customer shall be entitled to make copies for its internal purposes only.

6.5. The Customer may only reproduce or publish any report by Eurofins | mgt in full without alteration. Eurofins | mgt name, logo or service marks, or any other means of identification cannot be used in any publication by the Customer unless the Customer has obtained the prior written consent of Eurofins | mgt.

7. LIMITATION OF LIABILITY

7.1. The Customer acknowledges that the Services are provided using the then current state of technology and methods developed and generally applied by Eurofins | mgt and involve sampling, analysis, interpretations, consulting work and conclusions. Eurofins | mgt shall use commercially reasonable degree of care in providing the Services.

7.2. Reports are issued on the basis of information, documents and/or samples provided by, or on behalf of, the Customer and solely for the benefit of the Customer who is responsible for acting as it sees fit on the basis of such reports. Neither Eurofins | mgt nor any of its officers, employees, agents or subcontractors shall be liable to the Customer nor any third party for any actions taken or not taken on the basis of such reports nor for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to Eurofins | mgt.

7.3. Eurofins | mgt shall not be liable for any delayed, partial or total non-performance of the Services arising directly or indirectly from any event outside Eurofins | mgt control including failure by the Customer to comply with any of its obligations hereunder.

7.4. The liability of Eurofins | mgt in respect of any claim for loss, damage or expense of any nature and howsoever arising shall in no circumstances exceed the lesser of an amount equal to 3 times the fee paid in respect of the Service which gives rise to such claim or $15,000.00.

7.5. Eurofins | mgt shall have no liability for any indirect or consequential loss including, without limitation, loss of production, loss of contracts, loss of profits, loss of business or costs incurred from business interruption, loss of opportunity, loss of goodwill or damage to reputation and cost of product recall (including any losses suffered as a result of distribution of the Customer's products subject of the Services prior to the report being released by Eurofins | mgt). It shall further have no liability for any loss, damage or expenses arising from the claims of any third party (including, without limitation, product liability claims) that may be incurred by the Customer.

7.6. In the event of any claim, the Customer must give written notice to Eurofins | mgt within 60 days of discovery of the facts alleged to justify such claim and, in any case, Eurofins | mgt shall be discharged from all liability for all claims for loss, damage or expense unless proceedings are brought within six calendar months from:

(a) the date of performance by Eurofins | mgt of the Service which gives rise to the claim; or

(b) the date when the Service should have been completed in the event of any alleged non performance.

7.7. Unless Eurofins | mgt explicitly agrees in writing, the Services shall be provided exclusively to the Customer and cannot be relied on by a third party. The Customer will indemnify and hold Eurofins | mgt harmless against any and all third party claims relating to the provision of the Services to the Customer.

7.8. The Customer shall be responsible for and indemnifies Eurofins | mgt against all costs, damages, liabilities, and injuries that may be caused to or incurred by Eurofins | mgt or its personnel or representatives including on the sampling site, during transportation or in the laboratory by the Customer's sample or by sampling site conditions.

8. FORCE MAJEURE

8.1. If Eurofins | mgt is prevented from performing or completing the Services for any cause outside Eurofins | mgt's control, including, but not limited to, acts of god, war, terrorist activity or industrial action; electricity outage; failure to obtain permits, licenses or registrations; illness, death or resignation of personnel or failure by Customer to comply with any of its obligations the Customer will pay to Eurofins | mgt:

(a) the amount of all non-refundable expenses incurred by Eurofins | mgt; and

(b) a proportion of the fee equal to the proportion of the Services actually carried out (provided that if the Services cannot be performed as a result of an act or omission on the part of the Customer, the Customer will pay the full fee and all expenses incurred by Eurofins | mgt),

and Eurofins | mgt will be relieved of all responsibility whatsoever for the partial or total non-performance of the Services.

9. MISCELLANEOUS

9.1. If any one or more provisions of the Terms are found to be illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired.

9.2. Except as expressly provided in these Terms or the Special Terms, the Customer may not assign or transfer any of its rights without Eurofins | mgt prior written consent.

9.3. The parties acknowledge that Eurofins | mgt provides the Services to the Customer as an independent contractor and that this agreement does not create any partnership, agency, employment or fiduciary relationship between Eurofins | mgt and the Customer.

9.4. Any failure by Eurofins | mgt to require the Customer to perform any of Eurofins | mgt obligations under these Terms or Special Terms shall not constitute a waiver of its right to require performance of that or any other obligation.

9.5. This agreement is exclusively governed by the laws of Australia and the parties submit to the exclusive jurisdiction of the Australian courts.

9.6. The Terms may be modified in writing from time to time by Eurofins | mgt and the order for Services will be governed by the most recent version of these Terms that are in effect at the time Eurofins | mgt accepts the order.

9.7. Unless Eurofins | mgt specifically confirms acceptance in writing, Eurofins | mgt will not be bound by any terms and conditions set out in the Customer's purchase order.

Data Quality Review
Limited ESA, Clyde North

This appendix reviews the Quality Assurance (QA) and Quality Control (QC) documentation. Quality assurance encompasses the actions, procedures, checks and decisions undertaken to ensure sample integrity and representativeness, and the reliability and accuracy of analysis results. The QA documentation should also include an indication of the Data Quality Objectives sought in relation to each significant action, test or process involved in the assessment.

QC activities measure the effectiveness of the QA procedures by undertaking testing, and then comparing results to previously established objectives. The quality of the information and/or data is deemed satisfactory when the QC results demonstrate that agreed objectives have been met.

The findings are summarised below:

QA/QC Aspects	Evidence & Evaluation
QA Documentation	
Project Quality Plan/Work Plan and Data Quality Objectives	The soil investigations were carried out in general accordance with the Cardno Lane Piper proposal dated 17 May 2013. A quality control program was implemented during the Assessment. In addition, a health and safety plan was also included as part of the Assessment. The Data Quality Objectives were expressed in terms of the purpose of the assessment and the relevant assessment criteria.
Data Validation Report	This review constitutes a data validation review.
Data Representativeness	
Holding Times	Chain of custody and laboratory reports provides evidence of holding times. Holding times were generally in conformance with Appendix B in EPA Publication IWRG701 *Sampling and Analysis of Waters, Wastewaters, Soils and Wastes* (June 2009).
Background samples	No offsite soil samples were collected due to the limited nature of this Assessment.
Data Precision & Accuracy	
QC Testing – Blind Replicates (Primary Lab)	***Soil*** • Acceptance Criteria: RPD < 50% • Soil Samples Analysed: 9 • Blind Replicate Samples Analysed: 1 • Blind Replicate Analyte Pairs: 1 • Number of Analyte Pairs Exceeding Criteria: 0
Trip Blank	One Trip Blank was collected however as the sampling was conducted using disposable sleaves the Trip Blank was not analysed.
Laboratory Internal QC	Evidence of the laboratories internal QC testing is present and complete. Eurofins MGT performed internal QC including matrix spikes, method blanks and laboratory duplicates. No exceedances of the criteria for the laboratory QC samples were recorded. The laboratory results used for this assessment are therefore

QA/QC Aspects	Evidence & Evaluation
	considered to be reliable and suitable for the purpose of this assessment.
Laboratory Method Detection Limit	Laboratory reports indicate the method detection limits were lower than the respective assessment criteria for all analytes.
NATA endorsement of laboratory reports	Laboratory reports were stamped with the NATA endorsement stamp and signature.
Calibration of Field Equipment	All field equipment was calibrated prior to use onsite.
Decontamination and Equipment Blanks	A rinsate blank was collected but not analysed as it was considered not necessary dedicated sampling equipment was used.
Data Comparability	
Standard Procedures	Fieldwork procedures are detailed in the report and are considered suitable for an Assessment of this type.
Qualified Personnel	The staff involved in managing and reviewing the project and those involved in fieldwork are qualified personnel.
Volatile Losses	There is no evidence of significant volatile losses
Sample Integrity	Field Chain of Custody (COCs) was completed to document all samples recovered and delivered to the laboratory. The COCs are presented in Appendix F.
Data Completeness	
Completeness of test program	The scope of work undertaken was generally consistent with that required to complete this assessment.
Validity of Data Set	The data quality review indicates no significant systematic errors in the data collection process for Assessment. The data set used as the basis for the Assessment is considered valid and complete.

Appendix G
16 Pages

Title Information

Basic Property Report

Current Certificate of Title

Historic Chain of Titles

Property Report from **www.land.vic.gov.au** on 16 May 2013 08:31 PM

Address: 1525 POUND ROAD CLYDE NORTH 3978
Lot and Plan Number: Lot 2 PS327975
Standard Parcel Identifier (SPI): 2\PS327975
Local Government (Council): CASEY **Council Property Number:** 77838
Directory Reference: Melway 135 H4

This land is in an area added to the Urban Growth Boundary after 2005.
It may be subject to the Growth Area Infrastructure Contribution.

For more information about this contribution go to the **Growth Areas Authority** website.

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

Further information about the building control system and building in bushfire prone areas can be found on the Building Commission website www.buildingcommission.com.au

State Electorates

Legislative Council: EASTERN VICTORIA (2005)
Legislative Assembly: BASS (2001)

Utilities

Rural Water Business: Southern Rural Water
Metro Water Business: South East Water Limited
Melbourne Water: inside drainage boundary
Power Distributor: SP AusNet (Information about choosing an electricity retailer)

Planning Zone Summary

Planning Zone: URBAN GROWTH ZONE (UGZ)
SCHEDULE TO THE URBAN GROWTH ZONE
Planning Overlay: None

Planning scheme data last updated on 9 May 2013.

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, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting Planning Schemes Online

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987. It does not include information about exhibited planning scheme amendments, or zonings that may abut the land. To obtain a Planning Certificate go to Titles and Property Certificates

The Planning Property Report includes separate maps of zones and overlays

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

To view planning zones, overlay and heritage information in an interactive format visit Planning Maps Online

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

Area Map

ANSTAT

Order number: 6263463
Your Reference: 17591 (AR)
11/10/10 09:48

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

VOLUME 10240 FOLIO 187 Security no : 124035504163W
Produced 11/10/2010 09:47 am

LAND DESCRIPTION

Lot 2 on Plan of Subdivision 327975F.
PARENT TITLE Volume 09557 Folio 786
Created by instrument PS327975F 13/07/1995

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NANCYE MARGARET GEARON of "OAKWOOD" POUND ROAD CLYDE NORTH
PS327975F 13/07/1995

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AD405664S 01/02/2005
BENDIGO BANK LTD

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.

NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

DIAGRAM LOCATION

SEE PS327975F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AH462111E	NOTICE	Registered	31/08/2010

DOCUMENT END

PLAN OF SUBDIVISION

STAGE NO. /

LTO use only
EDITION 2

Plan Number
PS 327975F

Location of Land

Parish: CRANBOURNE

Township: –
Section: –
Crown Allotment: (PART) 63
Crown Portion: –

LTO Base Record: PARISH (2462)
Title Reference: VOL 9557 FOL 786

Last Plan Reference: LOT Z PS 145792
Postal Address: "OAKWOOD" POUND ROAD CLYDE NORTH
(at time of subdivision)

AMG Co-ordinates (of approx. centre of land in plan) E 357 800 N 5780 000 Zone: 55

Vesting of Roads and/or Reserves

Identifier	Council/Body/Person
NIL	NIL

Council Certificate and Endorsement

Council Name: CRANBOURNE Ref: 4754

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

OPEN SPACE

(i) A requirement for public open space under section 18 of the Subdivision Act 1988 ~~has~~/has not been made.

~~(ii) The requirement has been satisfied.~~

~~(iii) The requirement is to be satisfied in Stage~~

Council delegate
~~Council seal~~

Date 22 / 12 / 93

Re-certified under section 11(7) of the Subdivision Act 1988

Council Delegate
Council Seal

Date / /

Notations

Staging This ~~is~~/is not a staged subdivision
Planning Permit No.

Depth Limitation DOES NOT APPLY

Survey This plan is/~~is not~~ based on survey

This survey has been connected to permanent marks no(s)
In Proclaimed Survey Area No.

Easement Information

Legend: E - Encumbering Easement or Condition in Crown Grant in the Nature of an Easement
A - Appurtenant Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
E-1	DATA TRANSMISSION	3	THIS PLAN	LOTS ON THIS PLAN
E-2	WATER SUPPLY & RIGHTS IN CONNECTION THEREWITH SET OUT IN AA1353	SEE PLAN	LAND ACQUISITION & COMPENSATION ACT 1989 AND SECTION 130 WATER ACT 1989 - SEE NOTIFICATION AG839968X	MELBOURNE WATER CORPORATION
E-3	DATA TRANSMISSION	3	THIS PLAN	LOTS IN THIS PLAN
	WATER SUPPLY & RIGHTS IN CONNECTION THEREWITH SET OUT IN AA1353	SEE PLAN	LAND ACQUISITION & COMPENSATION ACT 1989 AND SECTION 130 WATER ACT 1989 - SEE NOTIFICATION AG839968X	MELBOURNE WATER CORPORATION

LTO use only

Statement of Compliance/ Exemption Statement

Received ☑

Date 28 / 11 / 94

LTO use only

PLAN REGISTERED

TIME 5:25

DATE 13/ 7 / 95

K Osborne
Assistant Registrar of Titles

Sheet 1 of 2 Sheets

M. J. REDDIE SURVEYS PTY. LTD.
28 SHUTE AVE. BERWICK.
VIC. 3806
PHONE: 707 4117

LICENSED SURVEYOR (PRINT) MICHAEL J. REDDIE
SIGNATURE Michael J Reddie DATE 29 / 11 /1993
REF 93-10-6 VERSION 1.

DATE / /
COUNCIL DELEGATE SIGNATURE

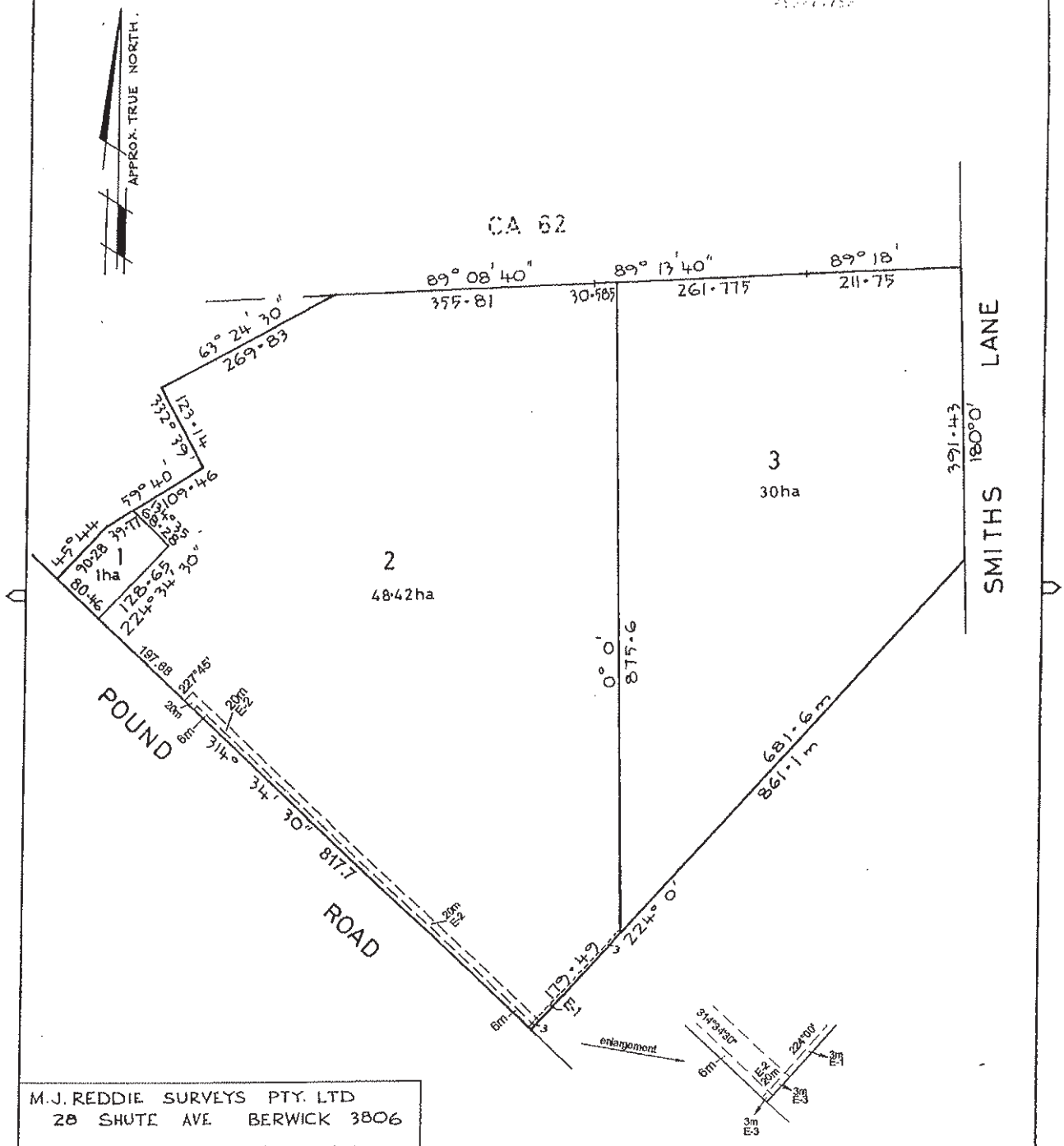
Original sheet size A3

T.O.1

PLAN OF SUBDIVISION

Stage No.

Plan Number
PS 327975F



M.J. REDDIE SURVEYS PTY. LTD
28 SHUTE AVE. BERWICK 3806
PHONE: 7074117

Sheet 2 of 2 sheets

ORIGINAL
SCALE: 1:5000
SHEET SIZE: A3

SCALE
50 0 100 200
LENGTHS ARE IN METRES

LICENSED SURVEYOR (PRINT) MICHAEL J. REDDIE
SIGNATURE Michael J Reddie DATE 29 / 11 /1993
REF 93-10-6 VERSION 1

DATE / /
COUNCIL DELEGATE SIGNATURE
Original sheet size A3

0 10 20 30 40 50 60 70 80 90 100 mm

T.O.2

MODIFICATION TABLE

RECORD OF ALL ADDITIONS OR CHANGES TO THE PLAN

PLAN NUMBER

PS327975F

WARNING: THE IMAGE OF THIS DOCUMENT OF THE REGISTER HAS BEEN DIGITALLY AMENDED. NO FURTHER AMENDMENTS ARE TO BE MADE TO THE ORIGINAL DOCUMENT OF THE REGISTER.

AFFECTED LAND/PARCEL	LAND/PARCEL IDENTIFIER CREATED	MODIFICATION	DEALING NUMBER	DATE	EDITION NUMBER	ASSISTANT REGISTRAR OF TITLES
LOT 2	E-2 , E-3	NOTIFICATION OF EASEMENT	AG839968X	27/11/09	2	DS

Produced 05/06/2013 03:52 PM

Volume 10240 Folio 187
Folio Creation: Created as a computer folio
Parent title Volume 09557 Folio 786

RECORD OF ALTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
10/01/2000	25/01/2000	W513601S	Y	DISCHARGE OF MORTGAGE M918170X
10/01/2000	25/01/2000	W513600V	Y	DISCHARGE OF MORTGAGE M068427V

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
01/02/2005	01/02/2005	AD405663U	Y

DISCHARGE OF MORTGAGE
MORTGAGE(S) REMOVED
P963669L

01/02/2005	01/02/2005	AD405664S	Y

MORTGAGE OF LAND
MORTGAGE AD405664S 01/02/2005
BENDIGO BANK LTD

28/10/2009	27/11/2009	AG839968X	Y

NOTIFICATION OF EASEMENT OR RIGHT

30/08/2010	31/08/2010	AH462111E	Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987
NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

09/12/2010	09/12/2010	AH662891H	Y

CAVEAT
CAVEAT AH662891H 09/12/2010
Caveator
POUND ROAD CLYDE PTY LTD
Capacity PURCHASER/FEE SIMPLE
Lodged by
DHP LAWYERS PTY. LTD.
Notices to
DHP LAWYERS PTY LTD of 211 WAVERLEY ROAD EAST MALVERN VIC 3145

16/12/2010	16/12/2010	AH678540A	Y

DISCHARGE OF MORTGAGE
AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)
MORTGAGE AD405664S

STATEMENT END

VOTS Snapshot

Volume 10240 Folio 187
124013053136M
Produced 01/02/2005 03:23 pm

LAND DESCRIPTION

Lot 2 on Plan of Subdivision 327975F.
PARENT TITLE Volume 09557 Folio 786
Created by instrument PS327975F 13/07/1995

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NANCYE MARGARET GEARON of "OAKWOOD" POUND ROAD CLYDE NORTH
PS327975F 13/07/1995

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE P963669L 21/08/1990
WESTPAC BANKING CORPORATION

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 PS327975F FOR FURTHER DETAILS AND BOUNDARIES

Produced 05/06/2013 03:55 PM

Volume 09557 Folio 786
Folio Creation: Created as paper folio continued as computer folio
Parent title Volume 08762 Folio 767

RECORD OF ALTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
	14/07/1995	PS327975F	Y	Cancelled by PS327975F

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged

STATEMENT END

Paper Title Images

9557/786 - Version 0, Date 12/03/1999

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

CANCELLED

REGISTER BOOK

VOL. 9557 FOL. 786

VICTORIA

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

ALFRED JAMES GEARON Farmer and NANCYE MARGARET GEARON Married Woman - both of Pound Road Clyde North are proprietors as TENANTS IN COMMON - - IN EQUAL SHARES of an estate in fee simple subject to the encumbrances - - - notified hereunder in all that land in the Parish of Cranbourne - - - - - - County of Mornington being Lot 2 on Plan of Subdivision - - - - - - - No.145792 which land is shown enclosed by continuous lines on the map - - - - hereon and identified by that lot number - - - - - - - - - - - - - - - - - - -

Issued under Regulation 10 -

Derived From
VOL.8762 FOL.767

13/6/'84

OFFICE OF TITLES VICTORIA

Assistant Registrar of Titles

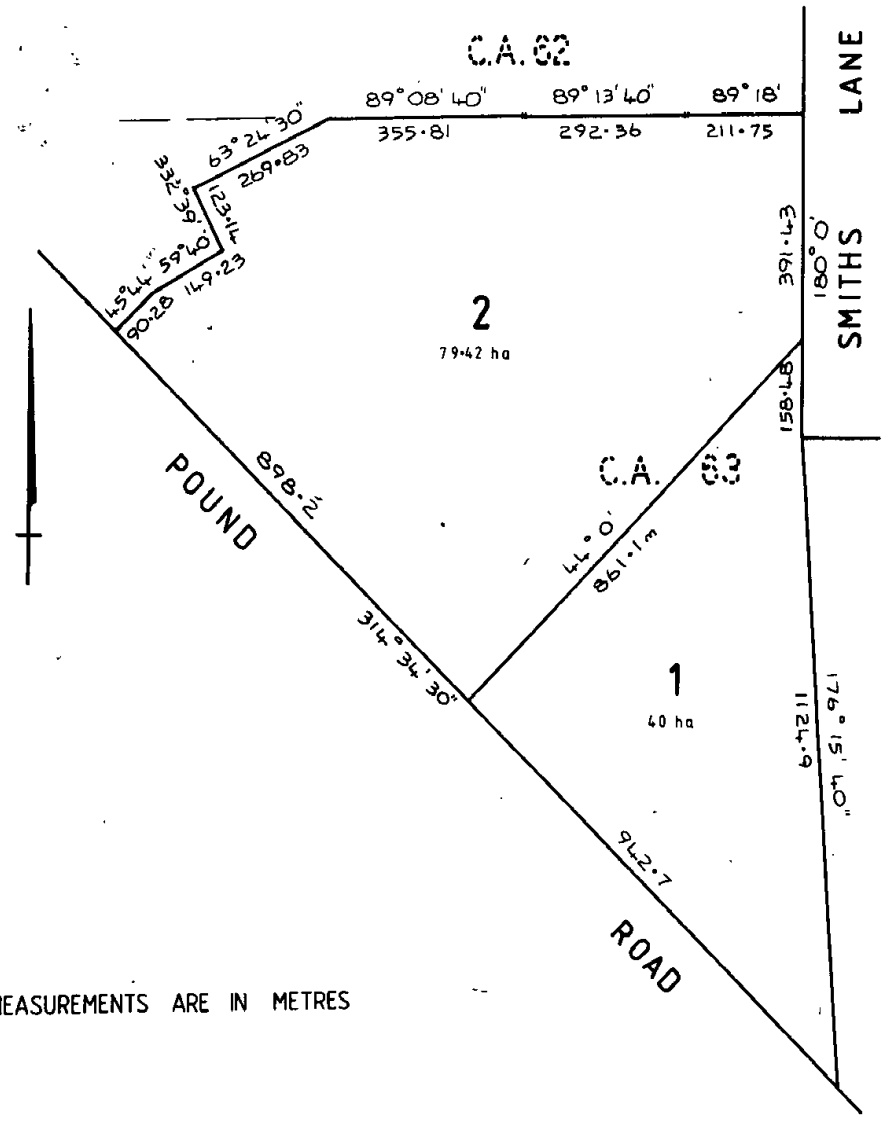
ENCUMBRANCES REFERRED TO

MORTGAGE K624087 -

THE ABOVE MORTGAGE IS DISCHARGED

'21 AUG 1990

OFFICE OF TITLES R.D.O. VICTORIA



MEASUREMENTS ARE IN METRES

PLAN PS 327975F AFFECTS LAND HEREIN

T09557-786-1-6

MORTGAGE TO COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA **VOL.** 9557 **FOL.** 786

Registered 2 JAN 1986

No. M068427 V

OFFICE OF TITLES W.J.M. VICTORIA

CANCELLED

NO. P532797F

OFFICE OF TITLES K.B. VICTORIA

MORTGAGE

PRIMARY INDUSTRY BANK OF AUSTRALIA LIMITED

REGISTERED 2/7/87

M918170X

OFFICE OF TITLES L.P.G. VICTORIA

CAVEAT

CAVEATOR: INGLETON PTY. LTD.

CAPACITY: PURCHASER/FEE SIMPLE

LODGED BY: 1757G H S WISE GERSHOV OF 4TH FLOOR
353 FLINDERS LA. MELBOURNE 3000

NOTICE TO: AS ABOVE

NO: P129848X

DATE: 13/4/89

OFFICE OF TITLES R.K. VICTORIA

CAVEAT WITHDRAWN
20 JUN 1991

OFFICE OF TITLES S.H. VICTORIA

SO

ALFRED JAMES GEARON DIED ON 23/10/89

PROBATE OF HIS WILL HAS BEEN GRANTED TO

NANCYE MARGARET GEARON & FRANCIS

WILLIAM CAREW

REGISTERED 21/8/90

P963666V

OFFICE OF TITLES R.D.O. VICTORIA

PROPRIETOR

NANCYE MARGARET GEARON OF "OAKWOOD"

POUND RD. CLYDE NORTH

REGISTERED 21/8/90

P963668P

OFFICE OF TITLES R.D.O. VICTORIA

MORTGAGE

WESTPAC BANKING CORPORATION

REGISTERED 21/8/90

P963669L

OFFICE OF TITLES R.D.O. VICTORIA

HISTORICAL SEARCH STATEMENT Land Victoria

Produced 05/06/2013 04:04 PM

Volume 08762 Folio 767
Folio Creation: Details Unknown
Parent titles :
Volume 08079 Folio 884 to Volume 08079 Folio 885

STATEMENT END

Paper Title Images

8762/767 - Version 0, Date 08/02/2000

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

VICTORIA

CANCELLED

REGISTER BOOK VOL. 8762 FOL. 767

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

VOL. 8762 FOL. 767

SO

THE EQUITY TRUSTEES EXECUTORS AND AGENCY COMPANY LIMITED of 472 Bourke -- Street Melbourne (Executor of the Will of Maggie Campbell deceased) 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 on the - - sheet annexed hereto being Lot 2 on Plan of Subdivision No.83901 - - - - - Parish of Cranbourne County of Mornington -

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

H.G. Spencer

OFFICE OF TITLES VICTORIA

Assistant Registrar of Titles

ENCUMBRANCES REFERRED TO

DERIVED FROM
VOL. 8079 FOL. 884
" 8079 " 885
24/2/'69.

PLAN 145792
AFFECTS LAND HEREIN

WILLIAM BRUNT CAMPBELL and ROBERT JOHN CAMPBELL both of Clyde North Farmers are now proprietors as TENANTS IN COMMON IN EQUAL SHARES
Registered 28th July 1969
No.D459629

OFFICE OF TITLES R. L. VICTORIA

ROBERT JOHN CAMPBELL of Clyde North Farmer is now the proprietor
Registered 6th August 1969
No.D467769

OFFICE OF TITLES R. L. VICTORIA

ALBERT ALFRED QUINLAN Farmer and NELLIE MAVIS QUINLAN Married Woman both of Mills Road Braeside are now JOINT PROPRIETORS
Registered 6th August 1969
No.D467770

OFFICE OF TITLES R. L. VICTORIA

CAVEAT No. F140378 **LODGED** 19 DEC 1973
CAVEAT WILL LAPSE ON REGISTRATION OF K624086
28 NOV 1983

OFFICE OF TITLES T.P.C. VICTORIA

CAVEAT No. F205431 **LODGED** 19 FEB 1974
CAVEAT WILL LAPSE ON REGISTRATION OF K624086
5 JAN. 1984

OFFICE OF TITLES B.D.D. VICTORIA

OFFICE OF TITLES W.C.H. VICTORIA

CAVEAT No. F693177 **LODGED** 13 MAY 1975
CAVEAT WITHDRAWN 10-7-75

OFFICE OF TITLES B.D.D. VICTORIA

OFFICE OF TITLES I.R.S. VICTORIA

A. QUINLAN ESTATES LTD. of 229 Thomas Street Dandenong is now the proprietor
Registered 18th December 1975
No.F974335

OFFICE OF TITLES D.W.H. VICTORIA

ALFRED JAMES GEARON Farmer and NANCYE MARGARET GEARON Married Woman both of Pound Road Clyde North are now proprietors as TENANTS IN COMMON IN EQUAL SHARES
Registered 10th November 1983
No.K624086

OFFICE OF TITLES R.L.J. VICTORIA

MORTGAGE to WESTPAC BANKING CORPORATION
Registered 10th November 1983
No.K624087

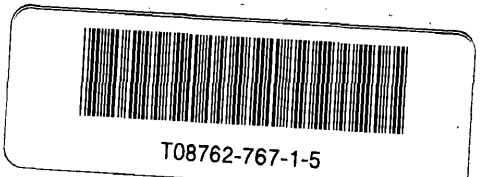
OFFICE OF TITLES R.L.J. VICTORIA

CANCELLED
The following Titles have been issued Pursuant to Regulation 12 of the Transfer of Land Act
on 13th June 1984
Lots One to 2 in V.8557 Fol. 785
to V.8557 Fol. 786

L.P. 145792

OFFICE OF TITLES L.H. VICTORIA

CANCELLED

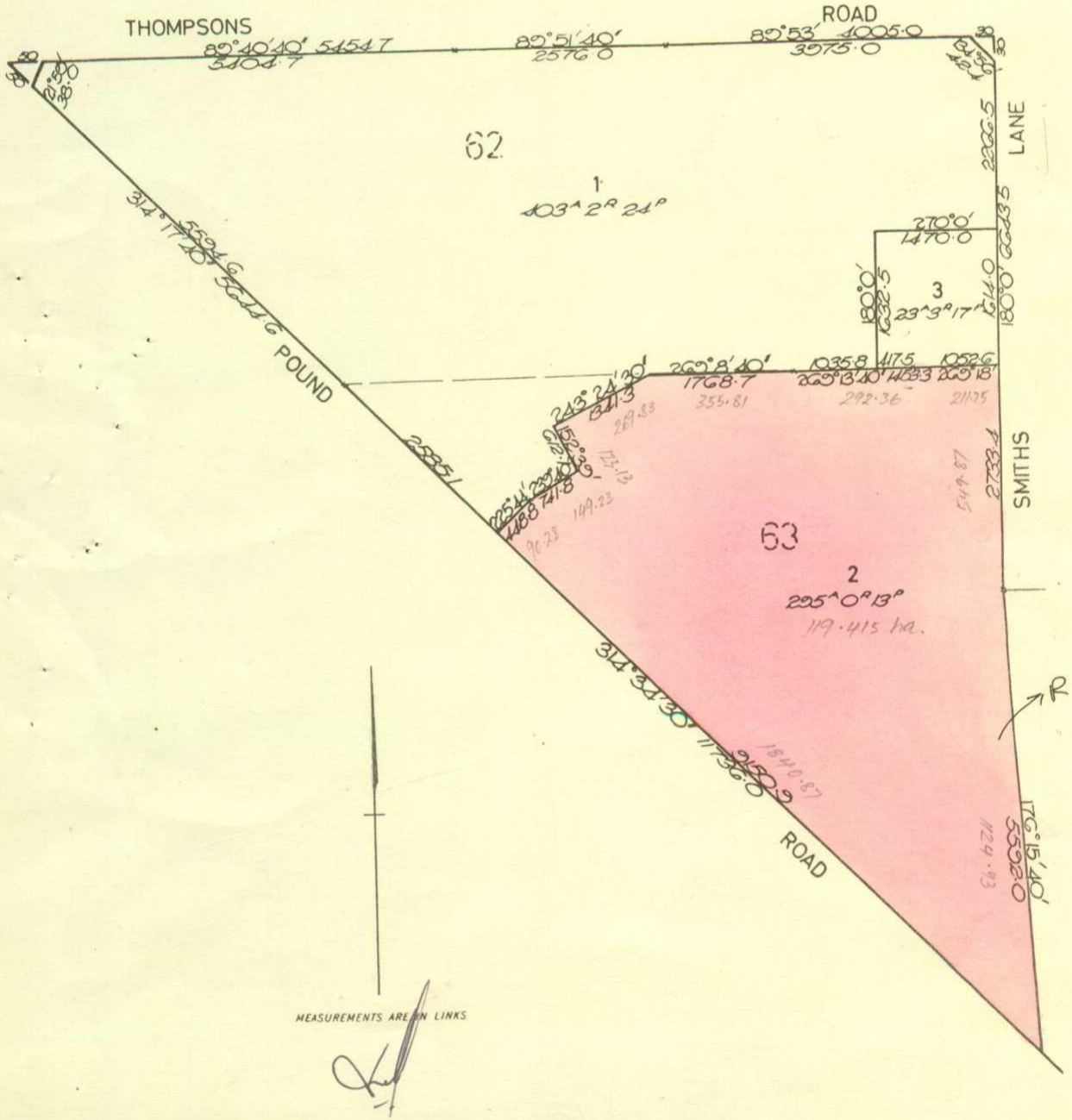


V.8762 F.767

ANNEXED SHEET REFERRED TO IN
CERTIFICATE OF TITLE VOL. 3762 FOL. 767

H.G. Spencer

ASSISTANT REGISTRAR OF TITLES



Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGE T

INTENTIONAL

Appendix H
11 Pages

Record Search Results

EPA Priority (Contaminated) Site Register

Energy Safe Australia

Royal Historical Society

Groundwater Resources Report

PRIORITY SITES REGISTER

Date generated 20 May 2013

BACKGROUND

EPA has a key responsibility in protecting beneficial uses of land. Many of these uses are regulated or controlled through a range of measures to prevent contamination of land and groundwater. Land contaminated by former waste disposal, industrial and similar activities is frequently discovered during changes to land use - for example, from industrial to residential use. In most cases these can be managed at the time that the change of land use occurs. Some sites however, present a potential risk to human health or to the environment and must be dealt with as a priority. Such sites are typically subject to clean-up and/or management under EPA directions.

WHAT ARE PRIORITY SITES?

Priority Sites are sites for which EPA has issued a Cleanup Notice pursuant to section 62A, or a Pollution Abatement Notice pursuant to section 31A or 31B (relevant to land and/or groundwater) of the Environment Protection Act 1970. Typically these are sites where pollution of land and/or groundwater presents a potential risk to human health or to the environment. The condition of these sites is not compatible with the current or approved use of the site without active management to reduce the risk to human health and the environment. Such management can include cleanup,monitoring and/or institutional controls.

The Priority Sites Register does not list sites managed by voluntary agreements or sites subject to management by planning controls (eg. sites managed in accordance with a section 173 agreement under the Planning and Environment Act 1987). Land purchasers should be aware of these limitations and make their own enquiries. A site is listed on the Priority Sites Register when EPA issues a CleanupNotice or a Pollution Abatement Notice (relevant to land and/or groundwater). A notice is a means by which EPA formalises requirements to manage pollution. Sites are removed from the Priority Sites Register once all conditions ofa Notice have been complied with. This is formalised through a Notice of Revocation pursuant to section 60B of the Act.

FURTHER INFORMATION

Additional information is available from:
EPA Information Centre
200 Victoria Street
Carlton VIC 3053
Tel: 03 96952722 Fax: 03 96958610
Media Enquiries: 03 96952704
EPA internet site: www.epa.vic.gov.au

Municipality	Suburb	Address	Issue	Notice Number
Ararat Rural City Council	ARARAT	26 Grano ST AU/3377	Former Industrial Site. Requires assessment and/or clean up	0090001739
Ararat Rural City Council	ARARAT	Mclellan ST AU/3377	Railway yard. Requires assessment and/or clean up	0090001744
Ballarat City Council	BALLARAT	Canadian Gully Reserve Geelong RD AU/3350	Historical deposit of mine tailings. Requires assessment and/or clean up	0090000494
Ballarat City Council	BALLARAT	1003 Humffray ST AU/3350	Former Industrial Site. Requires assessment and/or clean up	0090001857
Ballarat City Council	BALLARAT	Volume 6747 Folio 250 AU/3350	Current Industrial Site. Requires assessment and/or clean up	0090001913
Ballarat City Council	SANDHILL LAKE	C/a 14 Section A - Parish Of Bael Bael AU/3581	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090002097
Ballarat City Council	WARRENHEIP	Ballarat-Burrumbeet RD AU/3352	Accidental spill/leak (non-industrial site). Requires ongoing management	0090002430
Ballarat City Council	MOUNT CLEAR	3 WHITEHORSE RD AU/3350	Former Landfill. Requires ongoing management	0090003912
Banyule City Council	GREENSBOROUGH	131 Grimshaw ST AU/3088	Current Service Station. Requires assessment and/or clean up	0090002585
Bass Coast Shire Council	GRANTVILLE	1685 Bass HWY AU/3984	Current landfill. Requires ongoing management	0090000239
Bass Coast Shire Council	WONTHAGGI	C/a 15 Section 58 Cameron St AU/3995	Former Landfill. Requires ongoing management	0090003536
Bass Coast Shire Council	Cowes	Lot 1 PS525135 PHILLIP ISLAND ROAD AU/3922	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003642
Bass Coast Shire Council	Cowes	Lot 1 PS525135 PHILLIP ISLAND ROAD AU/3922	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003776
Bass Coast Shire Council	COWES	9 THE ESPLANADE AU/3922	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003816
Bayside City Council	BRIGHTON	601 Hampton ST AU/3186	Current Service Station. Requires ongoing management	0090000642
Bayside City Council	CHELTENHAM	18 Hamlet ST AU/3192	Current Industrial Site. Requires ongoing management	0090001671
Bayside City Council	BRIGHTON	316 New ST AU/3186	Former Service Station. Requires assessment and/or clean up	0090001698
Brimbank City Council	SUNSHINE	49 Mcintyre RD AU/3020	Current Industrial Site. Requires assessment and/or clean up	0090000284
Brimbank City Council	SYDENHAM	362 SYDENHAM RD AU/3037	Former Landfill. Requires assessment and/or clean up	0090000921
Brimbank City Council	SUNSHINE	47 Mcintyre RD AU/3020	Former Industrial Site. Requires ongoing management	0090001549
Brimbank City Council	DEER PARK	765 BALLARAT RD AU/3023	Current Industrial Site. Requires assessment and/or clean up	0090001886
Brimbank City Council	SUNSHINE NORTH	56 Spalding AV AU/3020	Current Industrial Site. Requires assessment and/or clean up	0090002269
Brimbank City Council	SUNSHINE NORTH	56 Spalding AV AU/3020	Current Industrial Site. Requires assessment and/or clean up	0090002270
Brimbank City Council	SUNSHINE	Hulett ST AU/3020	Former Landfill. Requires assessment and/or clean up	0090002476
Brimbank City Council	BROOKLYN	Bunting RD AU/3012	Former Landfill. Requires ongoing management	0090002743
Brimbank City Council	SUNSHINE WEST	527 SOMERVILLE RD AU/3020	Current Industrial Site. Requires assessment and/or clean up	0090003166
Brimbank City Council	BROOKLYN	69 BUNTING RD AU/3012	Illegal dumping. Requires assessment and/or clean up	0090003179
Brimbank City Council	SUNSHINE	16 THIRD AV AU/3020	Current Industrial Site. Requires assessment and/or clean up	0090003227
Brimbank City Council	SUNSHINE NORTH	51 Mcintyre RD AU/3020	Current Industrial Site. Requires assessment and/or clean up	0090003274
Brimbank City Council	BROOKLYN	594 Geelong RD AU/3012	Former Landfill. Requires ongoing management	0090003478
Brimbank City Council	KEILOR DOWNS	Green Gully RD AU/3038	Former Landfill. Requires ongoing management	0090003524
Brimbank City Council	BROOKLYN	44 Mcdonald RD AU/3012	Former Landfill. Requires ongoing management	0090003591
Brimbank City Council	SUNSHINE	Hulett ST AU/3020	Former Landfill. Requires assessment and/or clean up	0090003670

Brimbank City Council	SUNSHINE	Hulett ST AU/3020	Former Landfill. Requires assessment and/or clean up	0090003671
Campaspe Shire Council	BAMAWM	Lot 2 Plan Of Subdivision 544316m Parish Of Torrumburry AU/3561	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001745
Campaspe Shire Council	KYABRAM	Graham RD AU/3620	Former Landfill. Requires ongoing management	0090003563
Campaspe Shire Council	ECHUCA	Echuca Landfill Echuca-Kyabram RD AU/3564	Former Landfill. Requires ongoing management	0090003569
Campaspe Shire Council	DIGGORA	ODONNELL RD AU/3561	Former Landfill. Requires ongoing management	0090003588
Cardinia Shire Council	NAR NAR GOON	Five Mile RD AU/3812	Former Landfill. Requires ongoing management	0090003597
Casey City Council	NARRE WARREN NOR	Quarry RD AU/3804	Former Landfill. Requires ongoing management	0090003600
Central Goldfields Shire Council	CARISBROOK	Potts LANE AU/3464	Former Landfill. Requires ongoing management	0090003566
Colac-Otway Shire Council	COLAC	Bruce ST AU/3250	Former Landfill. Requires ongoing management	0090001464
Colac-Otway Shire Council	CORONOOKE	Factory RD AU/3254	Current Industrial Site. Requires assessment and/or clean up	0090002082
Colac-Otway Shire Council	MARENGO	Roberts RD AU/3233	Former Landfill. Requires ongoing management	0090003634
Colac-Otway Shire Council	COLAC	Bruce ST AU/3250	Former Landfill. Requires ongoing management	0090003696
Corangamite Shire Council	COBRICO	County Boundary RD AU/3266	Current landfill. Requires ongoing management	0090000292
Corangamite Shire Council	GLENORMISTON	Terang-Mortlake RD AU/3265	Former Landfill. Requires ongoing management	0090003622
Darebin City Council	PRESTON	62 Albert ST AU/3072	Current Industrial Site. Requires ongoing management	0090000535
Darebin City Council	PRESTON	140 High ST AU/3072	Former Industrial Site. Requires assessment and/or clean up	0090000660
Darebin City Council	PRESTON	67 High ST AU/3072	Former Service Station. Requires assessment and/or clean up	0090001449
Darebin City Council	PRESTON	194 Bell ST AU/3072	Former Industrial Site. Requires assessment and/or clean up	0090002088
Darebin City Council	NORTHCOTE	24 Leinster GR AU/3070	Current Industrial Site. Requires assessment and/or clean up	0090002323
Darebin City Council	PRESTON	140 High ST AU/3072	Former Industrial Site. Requires assessment and/or clean up	0090002948
Darebin City Council	PRESTON	3 & 7 NEWMAN ST AU/3072	Former Industrial Site. Requires assessment and/or clean up	0090003150
Darebin City Council	NORTHCOTE	Clifton ST AU/3070	Former Landfill. Requires ongoing management	0090003493
Darebin City Council	RESERVOIR	87 Newlands RD AU/3073	Former Landfill. Requires ongoing management	0090003508
East Gippsland Shire Council	SWIFTS CREEK	349 Swifts Creek East RD AU/3896	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000114
East Gippsland Shire Council	BAIRNSDALE	201 Main ST AU/3875	Former Service Station. Requires assessment and/or clean up	0090001552
East Gippsland Shire Council	BAIRNSDALE	205 Main ST AU/3875	Former Service Station. Requires assessment and/or clean up	0090001553
East Gippsland Shire Council	ORBOST	44 Salsibury ST AU/3888	Former Service Station. Requires assessment and/or clean up	0090001588
East Gippsland Shire Council	BAIRNSDALE	BOSWORTH RD AU/3875	Former Landfill. Requires ongoing management	0090003783
East Gippsland Shire Council	BAIRNSDALE	BOSWORTH RD AU/3875	Former Landfill. Requires ongoing management	0090003784
Frankston City Council	FRANKSTON	3 Rosella ST AU/3199	Former Industrial Site. Requires assessment and/or clean up	0090003211
Frankston City Council	FRANKSTON	3 Rosella ST AU/3199	Former Industrial Site. Requires assessment and/or clean up	0090003213
Frankston City Council	Frankston	McClelland DR AU/3199	Former Landfill. Requires ongoing management	0090003594
Gannawarra Shire Council	MURRABIT	179 MURRABIT WEST RD AU/3579	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003728
Glen Eira City Council	CAULFIELD SOUTH	371 Hawthorn RD AU/3162	Former Service Station. Requires assessment and/or clean up	0090001532
Glen Eira City Council	CAULFIELD SOUTH	818 Glen Huntly RD AU/3162	Former Service Station. Requires assessment and/or clean up	0090001761
Glenelg Shire Council	PORTLAND	210 Cape Nelson RD AU/3305	Current landfill. Requires ongoing management	0090001966
Greater Bendigo City Council	MAIDEN GULLY	195 Marong RD AU/3551	Historical deposit of mine tailings. Requires ongoing management	0090002451
Greater Bendigo City Council	West Bendigo	Crown lots: 67A~L/PP3473, 2088\PP3 2106\PP3473, AU/3000	Historical deposit of mine tailings. Requires assessment and/or clean up	0090003327
Greater Bendigo City Council	West Bendigo	Crown lots: 67A~L/PP3473, 2088\PP3 2106\PP3473, AU/3000	Historical deposit of mine tailings. Requires assessment and/or clean up	0090003884
Greater Dandenong City Council	DANDENONG	2 Hazel AV AU/3175	Current Industrial Site. Requires assessment and/or clean up	0090000108
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD AU/3172	Former Landfill. Requires ongoing management	0090000608
Greater Dandenong City Council	SPRINGVALE	917 Princes HWY AU/3171	Former Industrial Site. Requires assessment and/or clean up	0090001557
Greater Dandenong City Council	SPRINGVALE	310 Springvale RD AU/3171	Former Service Station. Requires ongoing management	0090001607
Greater Dandenong City Council	DANDENONG SOUTH	20 Cahill ST AU/3175	Former Industrial Site. Requires assessment and/or clean up	0090002115
Greater Dandenong City Council	BANGHOLME	790 Frankston Dendenong RD AU/3175	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090002377
Greater Dandenong City Council	DANDENONG	230 Frankston-Dandenong RD AU/3175	Current Service Station. Requires assessment and/or clean up	0090002792
Greater Dandenong City Council	DANDENONG SOUTH	125 COLEMANS RD AU/3175	Former Landfill. Requires assessment and/or clean up	0090003201
Greater Dandenong City Council	DANDENONG SOUTH	3 SWIFT WAY AU/3175	Current Industrial Site. Requires assessment and/or clean up	0090003386
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD AU/3172	Former Landfill. Requires ongoing management	0090003693
Greater Dandenong City Council	SPRINGVALE SOUTH	Clarke RD AU/3172	Former Landfill. Requires ongoing management	0090003850
Greater Geelong City Council	NORLANE	5 PRINCES HWY AU/3214	Former Industrial Site. Requires assessment and/or clean up	0090000011
Greater Geelong City Council	CORIO	Refinery RD AU/3214	Current petroleum storage site. Requires ongoing management	0090000024
Greater Geelong City Council	GEELONG NORTH	455 Melbourne RD AU/3215	Former Industrial Site. Requires assessment and/or clean up	0090000091
Greater Geelong City Council	WAURN PONDS	5 Katelyn CT AU/3216	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000113
Greater Geelong City Council	CORIO	246 Princes HWY AU/3214	Current Service Station. Requires assessment and/or clean up	0090000150
Greater Geelong City Council	NORTH GEELONG	Foreshore Area At End Of Crowle ST AU/3215	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000226
Greater Geelong City Council	GEELONG EAST	Eastern Botanical Gardens AU/3219	Gun, pistol or rifle range. Requires assessment and/or clean up	0090000498
Greater Geelong City Council	CORIO	Of Harpur RD AU/3214	Former Service Station. Requires assessment and/or clean up	0090000782
Greater Geelong City Council	LARA	Princes HWY AU/3212	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090001012

Greater Geelong City Council	GEELONG NORTH	1 Roseneath ST AU/3215	Former chemical storage facility. Requires assessment and/or clean up	0090001664
Greater Geelong City Council	MANIFOLD HEIGHTS	35 Shannon AV AU/3218	Current Service Station. Requires assessment and/or clean up	0090001688
Greater Geelong City Council	DRYSDALE	97 High ST AU/3222	Current Service Station. Requires ongoing management	0090001808
Greater Geelong City Council	MOOLAP	132 Point Henry RD AU/3221	Current Industrial Site. Requires assessment and/or clean up	0090001832
Greater Geelong City Council	MOOLAP	132 Point Henry RD AU/3221	Current Industrial Site. Requires assessment and/or clean up	0090001833
Greater Geelong City Council	North Geelong	1 Roseneath ST AU/3215	Current Industrial Site. Requires assessment and/or clean up	0090001994
Greater Geelong City Council	BALLAN	1 6511 Western FWY AU/3342	Former Service Station. Requires assessment and/or clean up	0090002139
Greater Geelong City Council	CORIO	391 Princes HWY AU/3214	Former Service Station. Requires assessment and/or clean up	0090002217
Greater Geelong City Council	GEELONG WEST	151 Church ST AU/3218	Former Service Station. Requires assessment and/or clean up	0090002218
Greater Geelong City Council	BELMONT	180 Barwon Heads RD AU/3216	Former Service Station. Requires assessment and/or clean up	0090002289
Greater Geelong City Council	CORIO	83 Purnell RD AU/3214	Current Service Station. Requires ongoing management	0090002343
Greater Geelong City Council	CORIO	1500 Biddlecombe AV AU/3214	Current landfill. Requires assessment and/or clean up	0090002361
Greater Geelong City Council	NORLANE	60 NORTH SHORE RD AU/3214	Current Industrial Site. Requires assessment and/or clean up	0090002362
Greater Geelong City Council	PORTARLINGTON	46 Fenwick ST AU/3223	Current petroleum storage site. Requires assessment and/or clean up	0090002499
Greater Geelong City Council	NORLANE	60 NORTH SHORE RD AU/3214	Current Industrial Site. Requires assessment and/or clean up	0090003651
Greater Shepparton City Council	KIALLA WEST	7358 Goulburn Valley HWY AU/3631	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000083
Greater Shepparton City Council	SHEPPARTON	60 Old Dookie RD AU/3630	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000289
Greater Shepparton City Council	SHEPPARTON NORTH	280 Daldy RD AU/3631	Former Industrial Site. Requires assessment and/or clean up	0090001776
Greater Shepparton City Council	COSGROVE	Lot 1 Subdivision Plan 404181s AU/3631	Former Landfill. Requires ongoing management	0090003551
Hepburn Shire Council	CRESWICK	18 Clunes RD AU/3363	Former Service Station. Requires assessment and/or clean up	0090000263
Hepburn Shire Council	CRESWICK	C/a 45a Parish Of Creswick County Of Talbot AU/3363	Former Landfill. Requires ongoing management	0090003560
Hobsons Bay City Council	ALTONA	401 Kororoit Creek RD AU/3018	Current Industrial Site. Requires assessment and/or clean up	0090000009
Hobsons Bay City Council	ALTONA	541 Kororoit Creek RD AU/3018	Current chemical storage facility. Requires assessment and/or clean up	0090000425
Hobsons Bay City Council	ALTONA	351 MILLERS RD AU/3018	Current Industrial Site. Requires assessment and/or clean up	0090000597
Hobsons Bay City Council	SPOTSWOOD	512 Melbourne RD AU/3015	Railway yard. Requires assessment and/or clean up	0090000799
Hobsons Bay City Council	NEWPORT	Burleigh ST AU/3015	Current petroleum storage site. Requires assessment and/or clean up	0090001325
Hobsons Bay City Council	NEWPORT	Underground Section Of Petroleum Pipelines That Run Under Champion Rd AU/3015	Current Industrial Site. Requires assessment and/or clean up	0090001459
Hobsons Bay City Council	SPOTSWOOD	18 Drake ST AU/3015	Current petroleum storage site. Requires assessment and/or clean up	0090001709
Hobsons Bay City Council	SOUTH KINGSVILLE	22 New ST AU/3013	Former Landfill. Requires assessment and/or clean up	0090001727
Hobsons Bay City Council	NEWPORT	411 Douglas PDE AU/3015	Current Industrial Site. Requires assessment and/or clean up	0090002086
Hobsons Bay City Council	SPOTSWOOD	42 Simcock AV AU/3015	Former Industrial Site. Requires assessment and/or clean up	0090002179
Hobsons Bay City Council	ALTONA MEADOWS	306 Queen ST AU/3028	Current Service Station. Requires assessment and/or clean up	0090002186
Hobsons Bay City Council	SOUTH KINGSVILLE	38 Blackshaws RD AU/3013	Former Industrial Site. Requires ongoing management	0090002381
Hobsons Bay City Council	WILLIAMSTOWN	12 Seaview PDE AU/3016	Current Industrial Site. Requires ongoing management	0090002444
Hobsons Bay City Council	ALTONA	Elfield Meadows Estate Defined By Volume 10426 AU/3018	Waste Acid Sulfate Soils. Requires ongoing management	0090002765
Hobsons Bay City Council	SPOTSWOOD	144 HALL ST AU/3015	Current Industrial Site. Requires assessment and/or clean up	0090003301
Hobsons Bay City Council	ALTONA	401 Kororoit Creek RD AU/3018	Current Industrial Site. Requires assessment and/or clean up	0090003368
Hobsons Bay City Council	ALTONA	Queen ST AU/3018	Former Landfill. Requires ongoing management	0090003472
Hobsons Bay City Council	BROOKLYN	Hardie RD AU/3025	Former Landfill. Requires ongoing management	0090003487
Hobsons Bay City Council	ALTONA NORTH	Kyle RD AU/3025	Former Landfill. Requires ongoing management	0090003527
Horsham Rural City Council	HORSHAM	15 MILL ST AU/3400	Former petroleum storage site. Requires assessment and/or clean up	0090003761
Hume City Council	DIGGERS REST	50 Edwards RD AU/3427	Illegal dumping. Requires assessment and/or clean up	0090000070
Hume City Council	BULLA	315 Loemans RD AU/3428	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000177
Hume City Council	GREENVALE	Woodlands Historical Park AU/3059	Illegal dumping. Requires ongoing management	0090001856
Hume City Council	CAMPBELLFIELD	1735 Sydney RD AU/3061	Current Industrial Site. Requires assessment and/or clean up	0090002373
Hume City Council	SOMERTON	Cliffords RD AU/3062	Former Industrial Site. Requires assessment and/or clean up	0090002446
Hume City Council	CRAIGIEBURN	Craigieburn RD AU/3064	Former Landfill. Requires ongoing management	0090003107
Hume City Council	CAMPBELLFIELD	5 - 11 Reo CR AU/3061	Current Industrial Site. Requires assessment and/or clean up	0090003276
Hume City Council	CAMPBELLFIELD	26 GLENBARRY RD AU/3061	Illegal dumping. Requires assessment and/or clean up	0090003380
Hume City Council	CRAIGIEBURN	Craigieburn RD AU/3064	Former Landfill. Requires ongoing management	0090003475
Hume City Council	CAMPBELLFIELD	Mahoneys RD AU/3061	Former Landfill. Requires ongoing management	0090003496
Hume City Council	TULLAMARINE	Western AV AU/3043	Former Landfill. Requires ongoing management	0090003530
Hume City Council	DIGGERS REST	65 EDWARDS RD AU/3427	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003640
Hume City Council	KEILOR	Annandale RD AU/3036	Former Landfill. Requires ongoing management	0090003689
Hume City Council	DIGGERS REST	95 MCLEODS RD AU/3427	Illegal dumping. Requires assessment and/or clean up	0090003710
Hume City Council	KEILOR	Annandale RD AU/3036	Former Landfill. Requires ongoing management	0090003730
Hume City Council	CAMPBELLFIELD	Bolinda RD AU/3061	Former Landfill. Requires ongoing management	0090003793
Hume City Council	CAMPBELLFIELD	Bolinda RD AU/3061	Former Landfill. Requires ongoing management	0090003794
Kingston City Council	DINGLEY VILLAGE	370 Old Dandenong RD AU/3172	Current landfill. Requires ongoing management	0090000093

Kingston City Council	CHELSEA	Former Chelsea Landfill Mulkarra DR AU/3196	Former Landfill. Requires ongoing management	0090000311
Kingston City Council	CHELSEA	476 Nepean HWY AU/3196	Former Service Station. Requires assessment and/or clean up	0090001389
Kingston City Council	Dingley Village	Waterway East of Boundary Road AU/#	Former Industrial Site. Requires assessment and/or clean up	0090001391
Kingston City Council	MORDIALLOC	78 White ST AU/3195	Former Industrial Site. Requires assessment and/or clean up	0090002256
Kingston City Council	MOORABBIN	1 10 Ebden ST AU/3189	Former Industrial Site. Requires ongoing management	0090002273
Kingston City Council	CLAYTON SOUTH	Fraser RD AU/3169	Current landfill. Requires ongoing management	0090003226
Kingston City Council	CLAYTON SOUTH	RYANS RD AU/3169	Former Landfill. Requires ongoing management	0090003604
Kingston City Council	CLAYTON SOUTH	Ryans RD AU/3169	Former Landfill. Requires ongoing management	0090003607
Kingston City Council	CLAYTON SOUTH	8 Elder ST AU/3169	Former Landfill. Requires ongoing management	0090003610
Kingston City Council	CHELSEA	Scotch PDE AU/3196	Former Landfill. Requires ongoing management	0090003613
Kingston City Council	CLAYTON SOUTH	Cnr Deals RD & Heatherton RD AU/3169	Former Landfill. Requires ongoing management	0090003759
Kingston City Council	CLAYTON SOUTH	Cnr Deals RD & Heatherton RD AU/3169	Former Landfill. Requires ongoing management	0090003780
Kingston City Council	DINGLEY VILLAGE	370 Old Dandenong RD AU/3172	Former Landfill. Requires ongoing management	0090003831
Kingston City Council	DINGLEY VILLAGE	370 Old Dandenong RD AU/3172	Former Landfill. Requires ongoing management	0090003832
Knox City Council	WANTIRNA	706 Boronia RD AU/3152	Illegal dumping. Requires assessment and/or clean up	0090000181
Knox City Council	WANTIRNA SOUTH	Cathies LANE AU/3152	Former Landfill. Requires ongoing management	0090000475
Knox City Council	WANTIRNA SOUTH	14 Coppelia Street RD AU/3152	Former Landfill. Requires ongoing management	0090003344
Knox City Council	BAYSWATER	836 Mountain HWY AU/3153	Current Industrial Site. Requires assessment and/or clean up	0090003366
Knox City Council	WANTIRNA SOUTH	Cathies LANE AU/3152	Former Landfill. Requires ongoing management	0090003738
Latrobe City Council	TRARALGON	3 4 Bench Bartons LANE AU/3844	Ash pond with a Groundwater Attenuation Zone. Requires ongoing management	0090002894
Latrobe City Council	NEWBOROUGH	Haunted Hills RD AU/3825	Former Landfill. Requires ongoing management	0090003785
Latrobe City Council	NEWBOROUGH	Haunted Hills RD AU/3825	Former Landfill. Requires ongoing management	0090003786
Latrobe City Council	MORWELL	PT CA 86B & CA 104A Parish of Maryvale AU/3840	Former Landfill. Requires ongoing management	0090003787
Latrobe City Council	MORWELL	PT CA 86B & CA 104A Parish of Maryvale AU/3840	Former Landfill. Requires ongoing management	0090003788
Macedon Ranges Shire Council	LANCEFIELD	Baynton (Lot 16 LP208950) RD AU/3435	Former Landfill. Requires assessment and/or clean up	0090000241
Macedon Ranges Shire Council	KYNETON	Redesdale RD AU/3444	Former Landfill. Requires ongoing management	0090003557
Macedon Ranges Shire Council	BULLENGAROOK	Hobbs RD AU/3437	Former Landfill. Requires ongoing management	0090003582
Macedon Ranges Shire Council	DARRAWEIT GUIM	1387 BOLINDA-DARRAWEIT RD AU/3756	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003726
Macedon Ranges Shire Council	MALMSBURY	43 OLD QUARRY ROAD AU/3446	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003758
Mansfield Shire Council	MANSFIELD	Monkey Gully RD AU/3722	Former Landfill. Requires ongoing management	0090003844
Mansfield Shire Council	MANSFIELD	Monkey Gully RD AU/3722	Former Landfill. Requires ongoing management	0090003845
Maribyrnong City Council	YARRAVILLE	1 High ST AU/3013	Former Industrial Site. Requires ongoing management	0090000134
Maribyrnong City Council	WEST FOOTSCRAY	1 Graingers RD AU/3012	Current chemical storage facility. Requires assessment and/or clean up	0090000266
Maribyrnong City Council	YARRAVILLE	Yarraville Terminal Francis ST AU/3013	Current petroleum storage site. Requires assessment and/or clean up	0090000989
Maribyrnong City Council	YARRAVILLE	2A FRANCIS ST AU/3013	Current Industrial Site. Requires assessment and/or clean up	0090001122
Maribyrnong City Council	MAIDSTONE	9 WILLIAMSON RD AU/3012	Former Industrial Site. Requires assessment and/or clean up	0090001771
Maribyrnong City Council	Yarraville	325 Whitehall Street AU/3013	Former Industrial Site. Requires ongoing management	0090001941
Maribyrnong City Council	Yarraville	325 Whitehall Street AU/3013	Former Industrial Site. Requires assessment and/or clean up	0090001942
Maribyrnong City Council	BROOKLYN	550 Geelong RD AU/3012	Former Industrial Site. Requires assessment and/or clean up	0090002056
Maribyrnong City Council	WEST FOOTSCRAY	Somerville RD AU/3012	Former Industrial Site. Requires assessment and/or clean up	0090002163
Maribyrnong City Council	BRAYBROOK	30 SOUTH RD AU/3019	Former Industrial Site. Requires assessment and/or clean up	0090002546
Maribyrnong City Council	BRAYBROOK	30 SOUTH RD AU/3019	Former Industrial Site. Requires assessment and/or clean up	0090002547
Maribyrnong City Council	FOOTSCRAY	Farnsworth AV AU/3011	Former Landfill. Requires ongoing management	0090003484
Maribyrnong City Council	MAIDSTONE	9 WILLIAMSON RD AU/3012	Former Industrial Site. Requires assessment and/or clean up	0090003767
Maroondah City Council	RINGWOOD EAST	18 Mount Dandenong RD AU/3135	Current Service Station. Requires assessment and/or clean up	0090001804
Maroondah City Council	CROYDON	Mt Dandenong RD AU/3136	Former Service Station. Requires ongoing management	0090002862
Maroondah City Council	RINGWOOD	385 Canterbury RD AU/3134	Current Service Station. Requires assessment and/or clean up	0090002884
Melton Shire Council	PLUMPTON	1 Holden RD AU/3335	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000159
Melton Shire Council	MOUNT COTTRELL	180 Faulkners RD AU/3030	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000259
Melton Shire Council	PLUMPTON	627 Plumpton RD AU/3335	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000300
Melton Shire Council	MOUNT COTTRELL	180 Faulkners RD AU/3030	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000416
Melton Shire Council	RAVENHALL	53 Rebecca DR AU/3030	Industrial waste has been dumped at the site. Requires ongoing management	0090001469
Melton Shire Council	RAVENHALL	53 Rebecca DR AU/3030	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001470
Melton Shire Council	RAVENHALL	48A ORBIS DR AU/3023	Illegal dumping. Requires assessment and/or clean up	0090003361
Melton Shire Council	MELTON	Ferris RD AU/3337	Former Landfill. Requires ongoing management	0090003481
Melton Shire Council	PLUMPTON	1 HOLDEN RD AU/3335	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003652
Melton Shire Council	PLUMPTON	627 PLUMPTON RD AU/3335	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003861
Mildura Rural City Council	MILDURA	42 Ninth ST AU/3500	Current Service Station. Requires assessment and/or clean up	0090001869
Mildura Rural City Council	OUYEN	48 FARRELL ST AU/3490	Former petroleum storage site. Requires assessment and/or clean up	0090003224

Mildura Rural City Council	MILDURA	LOTS 12 & 13 ETIWANDA AV AU/3500	Former Landfill. Requires ongoing management	0090003306
Mildura Rural City Council	KOORLONG	Twentieth ST AU/3501	Former Landfill. Requires ongoing management	0090003585
Mildura Rural City Council	MILDURA	211 TENTH ST AU/3500	Former petroleum storage site. Requires assessment and/or clean up	0090003682
Mildura Rural City Council	MILDURA	LOTS 12 & 13 ETIWANDA AV AU/3500	Former Landfill. Requires ongoing management	0090003941
Mitchell Shire Council	NORTHWOOD	1630 Northwood RD AU/3660	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090001730
Mitchell Shire Council	NORTHWOOD	1630 Northwood RD AU/3660	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090001731
Mitchell Shire Council	SEYMOUR	117 Wimble ST AU/3660	Current Industrial Site. Requires assessment and/or clean up	0090001737
Mitchell Shire Council	BROADFORD	High ST AU/3658	Former Landfill. Requires ongoing management	0090003542
Mitchell Shire Council	KILMORE	Walders RD AU/3764	Former Landfill. Requires ongoing management	0090003834
Mitchell Shire Council	KILMORE	Walders RD AU/3764	Former Landfill. Requires ongoing management	0090003835
Mitchell Shire Council	SEYMOUR	Hume and Hovell Road AU/3660	Former Landfill. Requires ongoing management	0090003836
Moira Shire Council	YARRAWONGA	81 Channel RD AU/3730	Former Landfill. Requires ongoing management	0090003539
Moira Shire Council	NUMURKAH	Parish Of Katunga C/a 14 Sect D Naring Rd AU/3636	Former Landfill. Requires ongoing management	0090003545
Monash City Council	GLEN WAVERLEY	310 SPRINGVALE RD AU/3150	Current Industrial Site. Requires assessment and/or clean up	0090002027
Monash City Council	OAKLEIGH	1386 Dandenong RD AU/3166	Current Service Station. Requires assessment and/or clean up	0090003367
Monash City Council	CLAYTON	1555 Centre RD AU/3168	Current Industrial Site. Requires assessment and/or clean up	0090003725
Monash City Council	CLAYTON	1555 Centre RD AU/3168	Current Industrial Site. Requires assessment and/or clean up	0090003892
Moonee Valley City Council	MOONEE PONDS	783 Mt Alexander RD AU/3039	Current Service Station. Requires assessment and/or clean up	0090000664
Moonee Valley City Council	ASCOT VALE	421 Mt Alexander RD AU/3032	Former Service Station. Requires assessment and/or clean up	0090002031
Moonee Valley City Council	ASCOT VALE	Mt Alexander RD AU/3032	Current Service Station. Requires assessment and/or clean up	0090002299
Moorabool Shire Council	MOUNT EGERTON	Cnr Yendon-Egerton Rd & Ballan-Egerton Rd AU/3352	Former Landfill. Requires ongoing management	0090001283
Moorabool Shire Council	BACCHUS MARSH	Hallets Way Bacchys Marsh AU/3340	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001880
Moorabool Shire Council	ROWSLEY	C/a 5e Section 13 Parish Of Gorrockburkgap County Of Grant AU/3340	Gun, pistol or rifle range. Requires ongoing management	0090002652
Moorabool Shire Council	FISKVILLE	Geelong-Ballan RD AU/3342	Current Industrial Site. Requires assessment and/or clean up	0090003174
Moorabool Shire Council	FISKVILLE	Geelong-Ballan RD AU/3342	Current Industrial Site. Requires assessment and/or clean up	0090003319
Moorabool Shire Council	MADDINGLEY	Side Of Kerrs RD AU/3340	Former Landfill. Requires ongoing management	0090003631
Moreland City Council	COBURG NORTH	46 Newlands RD AU/3058	Current Service Station. Requires assessment and/or clean up	0090000000
Moreland City Council	BRUNSWICK	227 Barkly ST AU/3056	Former Industrial Site. Requires assessment and/or clean up	0090000624
Moreland City Council	BRUNSWICK	225 Barkly ST AU/3056	Former Industrial Site. Requires assessment and/or clean up	0090000747
Moreland City Council	BRUNSWICK	227 Barkly ST AU/3056	Former Industrial Site. Requires assessment and/or clean up	0090001205
Moreland City Council	BRUNSWICK	225 Barkly ST AU/3056	Former Industrial Site. Requires assessment and/or clean up	0090001206
Moreland City Council	COBURG NORTH	737 Sydney RD AU/3058	Former Service Station. Requires assessment and/or clean up	0090001860
Moreland City Council	PASCOE VALE	512 PASCOE VALE RD AU/3044	Current Service Station. Requires assessment and/or clean up	0090002542
Moreland City Council	COBURG NORTH	46 Newlands RD AU/3058	Current Service Station. Requires assessment and/or clean up	0090003800
Mornington Peninsula Shire Council	SOMERVILLE	182 Eramosa RD AU/3912	Illegal dumping. Requires assessment and/or clean up	0090000097
Mornington Peninsula Shire Council	MOUNT ELIZA	250 Moorooduc HWY AU/3930	Former Landfill. Requires ongoing management	0090000477
Mornington Peninsula Shire Council	RYE	Point Nepean RD AU/3941	Current Service Station. Requires ongoing management	0090000658
Mornington Peninsula Shire Council	MORNINGTON	25 Mayne AV AU/3931	Former Landfill. Requires assessment and/or clean up	0090000855
Mornington Peninsula Shire Council	RED HILL	87 Arthurs Seat RD AU/3937	Current Service Station. Requires assessment and/or clean up	0090002114
Mornington Peninsula Shire Council	CRIB POINT	The ESP AU/3919	Former Industrial Site. Requires ongoing management	0090002897
Mornington Peninsula Shire Council	ROSEBUD WEST	119 Truemans RD AU/3940	Former Landfill. Requires ongoing management	0090003616
Mornington Peninsula Shire Council	CRIB POINT	2 Lens ST AU/3919	Former Landfill. Requires ongoing management	0090003619
Mornington Peninsula Shire Council	MOUNT ELIZA	250 Moorooduc HWY AU/3930	Former Landfill. Requires ongoing management	0090003744
Mount Alexander Shire Council	CASTLEMAINE	74 TOMKIES LANE AU/3450	Contaminated soil is retained and managed onsite. Requires ongoing management	0090000189
Mount Alexander Shire Council	CASTLEMAINE	74 TOMKIES LANE AU/3450	Contaminated soil is retained and managed onsite. Requires ongoing management	0090003388
Mount Alexander Shire Council	ELPHINSTONE	17 TURNER ST AU/3448	Illegal dumping. #	0090003943
Moyne Shire Council	ALLANSFORD	5331 Great Ocean RD AU/3277	Current Industrial Site. Requires ongoing management	0090002367
Moyne Shire Council	PORT FAIRY	Allotment 36a (pt) Parish Of Koroit Township Of Port Fairy - AU/3284	Former Landfill. Requires assessment and/or clean up	0090003337
Moyne Shire Council	PORT FAIRY	Badhams LANE AU/3284	Former Landfill. Requires ongoing management	0090003625
Murrindindi Shire Council	THORNTON	969 Goulburn Valley HWY AU/3712	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000149
Murrindindi Shire Council	GHIN GHIN	67 Homewood-Ghin Ghin Rd (crown Allotment 167b Parish Of Yea) & AU/3717	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001636
Murrindindi Shire Council	GHIN GHIN	67 Homewood-Ghin Ghin Rd (crown Allotment 167b Parish Of Yea) & AU/3717	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001680
Nillumbik Shire Council	ELTHAM	197 Sherbourne RD AU/3095	Former Industrial Site. Requires assessment and/or clean up	0090000158
Nillumbik Shire Council	PANTON HILL	165 MOTSCHALL RD AU/3759	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090002083
Nillumbik Shire Council	DIAMOND CREEK	50 Fraser ST AU/3089	Historical deposit of mine tailings. Requires assessment and/or clean up	0090002671
Nillumbik Shire Council	PANTON HILL	165 MOTSCHALL RD AU/3759	Current Industrial Site. Requires ongoing management	0090002787
Nillumbik Shire Council	KANGAROO GROUND	105 GRAHAM RD AU/3097	Former Landfill. Requires ongoing management	0090003505
Northern Grampians Shire Council	STAWELL	25-39 Horsham RD AU/3380 (crown allotment 136K Parish of Illawarra)	Former Industrial Site. Requires ongoing management	0090002140
Northern Grampians Shire Council	STAWELL	25-39 Horsham RD AU/3380 (crown allotment 136H Parish of Illawarra)	Former Industrial Site. Requires ongoing management	0090002142

Port Phillip City Council	ELWOOD	54A MARINE PDE AU/3184	Current Service Station. Requires assessment and/or clean up	0090000663
Port Phillip City Council	PORT MELBOURNE	14 Woodruff ST AU/3207	Former Industrial Site. Requires assessment and/or clean up	0090003384
South Gippsland Shire Council	FOSTER	Gippsland HWY AU/3960	Former Landfill. Requires ongoing management	0090003533
South Gippsland Shire Council	KOONWARRA	Rougheads RD AU/3954	Former Landfill. Requires ongoing management	0090003789
South Gippsland Shire Council	KOONWARRA	Rougheads RD AU/3954	Former Landfill. Requires ongoing management	0090003790
Southern Grampians Shire Council	HAMILTON	358 Glenelg HWY AU/3300	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090002058
Stonnington City Council	PRAHRAN	549 High ST AU/3181	Current Service Station. Requires assessment and/or clean up	0090000662
Strathbogie Shire Council	WAHRING	4615 GOULBURN VALLEY HWY AU/3608	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090003519
Surf Coast Shire Council	WINCHELSEA	114 Trebeck CT AU/3241	Illegal dumping. Requires assessment and/or clean up	0090001935
Surf Coast Shire Council	MOUNT MORIAC	450 Hendy Main RD AU/3240	Former Industrial Site. Requires assessment and/or clean up	0090003712
Swan Hill Rural City Council	TOL TOL	3216 Murray Valley HWY AU/3549	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000256
Swan Hill Rural City Council	ROBINVALE	Happy Valley Track AU/3459	Illegal dumping. Requires assessment and/or clean up	0090003340
Towong Shire Council	BETHANGA	4 Martins RD AU/3691	Former Landfill. Requires ongoing management	0090003554
Wangaratta Rural City Council	NORTH WANGARATTA	150 STAMPS LANE AU/3678	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003900
Wangaratta Rural City Council	NORTH WANGARATTA	150 STAMPS LANE AU/3678	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003901
Warrnambool City Council	ALLANSFORD	137 Ziegler PDE AU/3277	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up	0090000492
Warrnambool City Council	WARRNAMBOOL	52 ROACHES RD AU/3280	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090003440
Warrnambool City Council	WARRNAMBOOL	Braithwaite ST AU/3280	Former Landfill. Requires ongoing management	0090003637
Wellington Shire Council	COWWARR	Part C/a 41 Parish Of Toongabbie Nth Cert Of Title Vol 8713 Folio 830 AU/3857	Former Landfill. Requires assessment and/or clean up	0090000036
Wellington Shire Council	MAFFRA	57 Johnson ST AU/3860	Current Industrial Site. Requires assessment and/or clean up	0090001587
Wellington Shire Council	SALE	35 Mcghee ST AU/3850	Former Industrial Site. Requires assessment and/or clean up	0090001928
Wellington Shire Council	TRARALGON	Loy Yang Switchyard Bartons LANE AU/3844	Ash pond with a Groundwater Attenuation Zone. Requires ongoing management	0090002893
Wellington Shire Council	YARRAM	Off Yarram-Traralgon RD AU/3971	Former Landfill. Requires ongoing management	0090003055
Wellington Shire Council	YARRAM	Off Yarram-Traralgon RD AU/3971	Former Landfill. Requires ongoing management	0090003747
Wellington Shire Council	FULHAM	Lot 1 PS631513 SALE-HEYFIELD ROAD Sale-Heyfield RD AU/3851	Illegal dumping. Requires assessment and/or clean up	0090003795
Whitehorse City Council	BLACKBURN	2 Central RD AU/3130	Former Service Station. Requires assessment and/or clean up	0090002076
Whitehorse City Council	BLACKBURN	21 Blackburn RD AU/3130	Current Service Station. Requires ongoing management	0090002839
Whitehorse City Council	BLACKBURN	21 Blackburn RD AU/3130	Current Service Station. Requires ongoing management	0090003034
Whitehorse City Council	BOX HILL	14 Federation ST AU/3128	Former Landfill. Requires ongoing management	0090003134
Whitehorse City Council	BLACKBURN	24 Blackburn RD AU/3130	Former Service Station. Requires assessment and/or clean up	0090003153
Whitehorse City Council	BOX HILL	14 Federation ST AU/3128	Former Landfill. Requires ongoing management	0090003499
Whittlesea City Council	KEON PARK	6 Dunstans CT AU/3073	Former Industrial Site. Requires assessment and/or clean up	0090000016
Whittlesea City Council	THOMASTOWN	51 High ST AU/3074	Current Industrial Site. Requires assessment and/or clean up	0090000059
Whittlesea City Council	THOMASTOWN	342 Settlement RD AU/3074	Former Service Station. Requires assessment and/or clean up	0090001959
Whittlesea City Council	EPPING	215 COOPER ST AU/3076	Current landfill. Requires ongoing management	0090003348
Whittlesea City Council	EPPING	500 Cooper ST AU/3076	Former Landfill. Requires ongoing management	0090003490
Whittlesea City Council	EPPING	500 Cooper ST AU/3076	Former Landfill. Requires ongoing management	0090003502
Wodonga Rural City Council	WODONGA	3437 Beechworth-Wodonga RD AU/3690	Former Landfill. Requires ongoing management	0090003548
Wyndham City Council	LAVERTON NORTH	19 Little Boundary RD AU/3026	Current Industrial Site. Requires assessment and/or clean up	0090000003
Wyndham City Council	QUANDONG	1225 Ballan RD AU/3030	Illegal dumping. Requires assessment and/or clean up	0090000073
Wyndham City Council	LITTLE RIVER	LOT 1 EDGARS RD (1\PS544576) AU/3211	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000121
Wyndham City Council	LAVERTON NORTH	41 LEAKES RD AU/3026	Former Industrial Site. Requires assessment and/or clean up	0090000864
Wyndham City Council	LAVERTON NORTH	87 Pipe RD AU/3026	Current Industrial Site. Requires assessment and/or clean up	0090002450
Wyndham City Council	TRUGANINA	99 Palmers RD AU/3029	Solid inert waste has been dumped at the site. Requires ongoing management	0090002914
Yarra City Council	RICHMOND	3-21a Kent St 1/4-14/4 Little Buckingham St AU/3121	Former Industrial Site. Requires ongoing management	0090001920
Yarra Ranges Shire Council	KILSYTH	1 76 Fussell RD AU/3137	Former Industrial Site. Requires assessment and/or clean up	0090000004
Yarra Ranges Shire Council	KILSYTH	2 76 Fussell RD AU/3137	Former Industrial Site. Requires assessment and/or clean up	0090000005
Yarra Ranges Shire Council	KILSYTH	1 76 Fussell RD AU/3137	Former Industrial Site. Requires assessment and/or clean up	0090000006
Yarra Ranges Shire Council	KILSYTH	2 76 Fussell RD AU/3137	Former Industrial Site. Requires assessment and/or clean up	0090000007
Yarra Ranges Shire Council	GRUYERE	108 Killara RD AU/3770	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001184
Yarra Ranges Shire Council	BELGRAVE	2 Monbulk RD AU/3160	Former petroleum storage site. Requires assessment and/or clean up	0090002405
Yarra Ranges Shire Council	HEALESVILLE	271 MAROONDAH HWY AU/3777	Former Industrial Site. Requires assessment and/or clean up	0090003356
Yarra Ranges Shire Council	COLDSTREAM	Ingram RD AU/3770	Former Landfill. Requires ongoing management	0090003838
Yarra Ranges Shire Council	COLDSTREAM	Ingram RD AU/3770	Former Landfill. Requires ongoing management	0090003839
Yarra Ranges Shire Council	HEALESVILLE	Mt Riddel RD AU/3777	Former Landfill. Requires ongoing management	0090003840
Yarra Ranges Shire Council	HEALESVILLE	Mt Riddel RD AU/3777	Former Landfill. Requires ongoing management	0090003841

energysafe VICTORIA

Creating a safer state with electricity and gas

14 June, 2013

TO: Srijeeta De
Cardno LanePiper Pty Ltd

Ph: 9831 6137
Fax: 9808 3511

SEARCH FOR CATHODIC PROTECTION SYSTEMS

With reference to your email of 13/06/2013 a search of the CP database has failed to identify any cathodic protection systems registered at the following location:

- **1505-1525 Pound Road, Clyde North.**

Yours sincerely

Glenn Carrig
MANAGER ELECTROLYSIS MITIGATION

Energy Safe Victoria
ABN 27 462 247 657

Level 5 Building 2
4 Riverside Quay
Southbank VIC 3006

PO Box 262
Collins St West VIC 8007
DX 212569 Melbourne VIC

T (03) 9203 9700
F (03) 9686 2197
www.esv.vic.gov.au

State Government Victoria

ROYAL HISTORICAL SOCIETY OF VICTORIA INC.
239 A'Beckett Street, Melbourne 3000

Date: **14 June 2013**

Attention: **Srijeeta De**

Company: **Cardno LanePiper**

From: **Gerardine Horgan, Administrative Officer**

SITE SEARCH: 1505 – 1525 Pound Road, Clyde North.

The suburb of Clyde was originally occupied by squatters in the mid to late 1830s during the early European settlement of Melbourne and the surrounding areas. Over the next few decades the suburb gradually expanded and acquired basic services and amenities such as a railway station post office, churches and small shops.

The last edition of the Sands and McDougalls Directory to record country towns was that of 1969. Unfortunately like its predecessors, this edition merely listed the residents of Clyde North in alphabetical order with no indication as to their address. Thus, this source utilised by the society has been unable to yield any information specific to the aforementioned site.

Editions of the Victorian Municipal Directory from the early twentieth century up until the 1990s, describe Clyde, and when it was separated Clyde North, only as agricultural districts and do not expand further on this. A map survey of the area as revealed little change to the site in question and at present it remains an agricultural property. We regret that resources available to the society have been unable to provide any more detailed information on the site.

Research by Jeremy Pascoe & Rachel Harding

is strictly limited to the supplying of the services again or the payment of the cost of having the services supplied again. To the fullest extent permitted by law, the RHSV does not accept any liability or responsibility to any person for the information (or the use of such information) which is provided in this report or incorporated into it by reference.The RHSV expressly disclaims all and any liability and responsibility to any person in respect of the consequences of anything done or omitted to be done by such person in reliance, whether wholly or partially, of this report. The information in the report is provided on the basis that all persons accessing the report undertake responsibility for making their own inquiries with respect to the relevance and accuracy of its content.

Groundwater Resource Report

Groundwater catchment : Westernport **Easting:** 2532326 **Northing:** 2377321 **Depth to Water Table:** 5 - 10m

Groundwater Layers (Aquifers and Aquitards)	*Depth Below Surface (m)*	*Groundwater Salinity (mg/L)*	*Groundwater Management Unit (GMU)*	*(GMU) Depth Below Surface (m)*	*PCV (ML/yr)*
UTAF Upper Tertiary Aquifer (fluvial) sand, gravel and clay	0 32	3501-13000	KOOWEERUP	0	
BSE Mesozoic and Palaeozoic Bedrock (basement) sedimentary (fractured rock): Sandstone, siltstone, mudstone, shale. Igneous (fractured rock): includes volcanics, granites, granodiorites.	32 232	Unknown	KOOWEERUP	To All Depths	

For further information about this report contact:
Department of Sustainability and Enviroment
Email: groundwater@water.vic.gov.au

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

August 2012

Department of Sustainability and Environment
State Government Victoria

How to read this report

Introduction

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

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

Purpose of this report

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

Definitions and context

Term	Description
Groundwater Catchment	An identified area of the State within which groundwater resources are connected.
Easting / Northing	The 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 accessible format, such as large print or audio, please telephone 136 186, or through the National Relay Service (NRS) using a modem or textphone/teletypewriter (TTY) by dialling 1800 555 677,or email customer.service@dse.vic.gov.au

Department of Sustainability and Environment
State Government Victoria

Appendix I
3 Pages

Information About Environmental Reports

About Site Environmental Assessment Reports

1. Introduction

This document explains the Environmental Site Assessment (ESA) process and the context that applies to the use of Environmental Reports issued by Cardno Lane Piper.

2. What is an ESA?

Environmental Site Assessments (ESA) are undertaken for a range of purposes, specific to the brief issued by the client in each case. The scope may include one or a combination of any of the following:

- A factual report of the condition of a portion of the site or one aspect of an entire site.
- Assessment of the contamination levels in soil to be removed from a site – a waste classification assessment.
- Validation of the success of remediation of a site or a portion of a site.
- Provision of a professional opinion about the suitability of a site for one or more uses, in terms of its contamination status.

The scope of any ESA needs to be defined at the outset.

An ESA is not an Environmental Audit. Such audits are undertaken in accordance with the provisions of regulations enacted in various states of Australia, and are referred to as Site Audits in some jurisdictions. Statutory audits provide certification by EPA accredited auditors that a site is suitable for one or more uses. An ESA may provide similar advice but cannot be used in place of an audit if the latter is required by regulation in any instance. However in some circumstances and jurisdictions an ESA is sufficient to provide "environmental sign-off" of a site.

An ESA may be undertaken for due diligence purposes, to establish whether the site has been impacted to the extent that some beneficial uses of the site may be precluded. Due diligence audits in many cases may be completed as non-statutory Audits, although in some jurisdictions they can also be statutory audits, if defined as such at the outset.

3. The ESA Process

The Client generally initiates the ESA process by specifying a brief which identifies the specific objectives of the assessment. If not, it is the consultants' duty to so specify the ESA

In the case of an ESA to provide an opinion about the suitability of the site for use, it would be conducted in accordance with NEPM (Site Assessment). Such ESA would not commence until a thorough site history assessment (Phase 1 Assessment: to identify the potential for significant contamination at a site) is conducted. However, where the history is unclear, a broad screening of chemical parameters can be used to test environmental media. This normally includes a broad range of organic and inorganic compounds and elements, often referred to as an Environmental Screen.

(In the case of an ESA for a purpose other than to provide an opinion about the suitability of the site for use, it is not always necessary to undertake a Phase 1 assessment.)

The ESA requires sampling of soil at representative locations across the site. A NATA accredited laboratory performs the analysis of soil. It is impractical for all of the soil to be assessed. The ESA is often based on a statistical method of grid or random sampling, augmented by targeted sampling at locations known or suspected to be contaminated. Guidance on sampling strategy and density is provided in Australian Standard AS4482.1–2005. However, some considerable degree of judgement is still required in the application of any sampling and testing strategy. For example the blanket application of the "hot spot" method presented in this standard is often inappropriate given its limitations.

The field program also investigates the likelihood of contamination below the site surface. Field investigations must sample and test fill as well as the natural soils. If contamination is found then it is common for further work to be undertaken to characterise, to the extent practical, its vertical and horizontal extent. However, where fill is encountered and testing shows it to be uncontaminated, it must be realised that the heterogeneous nature of the material might mean that not all pockets of contaminated material can be detected using normal sampling regimes.

EPA guidelines for auditors, that may be relevant for an ESA, indicate the need in all cases to consider the potential for groundwater contamination in any site. This does not mean all sites need to be drilled to sample groundwater, but it is most often the case. Most hydrogeological settings and groundwater conditions are complex and vary in space and time. The condition of groundwater is investigated to identify if any beneficial use or environmental value of groundwater is precluded due to contamination.

As previously stated for soil, all groundwater at the site cannot be tested. The environmental investigations are conducted in accordance with industry standards and guidelines (e.g. EPA Vic Pub 668). This provides a level of confidence that a sufficiently comprehensive assessment of the groundwater at the site is achieved.

Where an investigation shows that groundwater is polluted, consideration should be given to assessing the risks and the need for and practicality of any clean up.

4. Environmental Assessment Report

The ESA Report details the findings of the ESA. It provides summary information on the site definition, the reasons for the assessment and other relevant facts. It reviews the scope and quality of the site investigations, laboratory testing and data analyses undertaken. These reports also present a review of the contamination status of the site, the need for any further clean up, and an opinion on the suitability of the site for a range of beneficial uses and land uses such as “residential – low density”, “commercial” etc, as appropriate.

However, as noted above, some ESA have a narrow scope such as for classification of waste soil for removal from site, and do not make conclusions on suitability of site for use.

The ESA Report generally includes copies of other documents and reports, necessary to support the assessment findings, presented as appendices. These can contain more detailed information than the body of the ESA Report. Care should be taken to also read the appended documents and the ESA report in full.

Cardno Lane Piper generally issues reports in electronic form (e-Report) on CD ROM. ESA Reports are issued in this format as Adobe Acrobat™ PDF files. However, a paper copy of the executive summary of the ESA Report is generally issued to the client, and others as required by the brief or by regulation.

5. Limitations of Environmental Assessment Report

The ESA Report is prepared in a manner that can be easily read by a lay person with a legitimate interest in the contamination status of the site, such as the site owner or occupier, EPA and Local Planning Authority. The ESA report is not intended for use by other parties or for other purposes. Anyone who uses the assessment report for purposes other than specified in the report, does so at their own risk.

The site should only be used for one or more of the beneficial uses and land uses identified in the ESA as suitable.

The conditions and qualifications may apply to the suitability of the site for use, and it is the responsibility of the Client to be cognizant of and accept these in accepting the report. Cardno Lane Piper are only responsible for the issuing of the ESA report but accepts no liability for the costs incurred in the implementation of ESA findings.

The ESA provides a “snapshot” of the site conditions at the time of the site investigation. Consequently, the report may not be valid at a later time if there has been any change to the contamination status of the site in that time. Verification of the status of the site may be required in cases where a significant time has elapsed, or site conditions have changed since the assessment and audit.

The ESA is necessarily limited by constraints such as time, cost and available information; although normal professional practice at the time has been applied with all due care to prepare the report. A necessary requirement of this process is the horizontal and vertical interpolation of data from discrete locations. However, site conditions are generally not homogenous and some discrepancies will occur between the actual and predicted results at locations not directly sampled. There is a risk that contamination may occur at the site and not be identified by a competent investigation and assessment. The approach adopted in sampling (a combination of statistically based grid and judgmental sampling) seeks to reduce, but cannot eliminate, this risk.

Where unexpected occurrences of contamination arise, subsequent to the issue of the ESA Report, Cardno Lane Piper should be permitted to make an interpretation of these facts in relation to the ESA Report findings. Consequently, the Client should inform Cardno Lane Piper and seek their opinion. Cardno Lane Piper accepts no liability for costs incurred due to such unexpected

occurrences, given the inherent uncertainties in the assessment process.

Cardno Lane Piper uses information provided by other parties as the basis for the ESA, and reliance on this information is at the discretion of Cardno Lane Piper. However, however Cardno Lane Piper cannot guarantee any of the facts, findings or conclusions presented by other parties. Cardno Lane piper will not be liable for the use of information, provided by others that is subsequently found to be intentionally misleading.

The ESA Report is not and does not purport to be anything other than a contaminated land ESA. It is not a geotechnical report and bore logs reproduced are for interpretation of the likely distribution of contamination. They are not intended for geotechnical interpretations and may not be adequate for this purpose.

The ESA Report is not intended to be a comprehensive analysis of the presence and associated risk of asbestos in buildings and services. Where asbestos in buildings and services is known or likely, the report may only caution that an appropriately qualified person be engaged to undertake demolition to avoid contamination of the site.

Cardno Lane Piper

25 February 2013