Atma Environmental
ATF Atma Unit Trust ABN 25 256 491 913

LANDFILL GAS RISK ASSESSMENT:
Part of 20 WANGARA ROAD, SANDRINGHAM, VICTORIA

Prepared for:

AS James Pty Ltd
15 Libbett Avenue
Clayton South, Victoria 3169

Project Ref.: 1741 Sandringham
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ACLCA
MEMBER: Australian Contaminated Land Consultants Association

56 William Street, Abbotsford, VIC. 3067
Telephone: (03) 9429 6955 Fax: (03) 9429 5911 Web: www.atmaenvironmental.com

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Proposed Indoor Netball Courts,
(Part of) 20 Wangara Road, Sandringham, Vic.

DATE: 30th April 2019

PROJECT MANAGER:



Jared Hammett, Senior Environmental Consultant

REVIEWED/APPROVED BY:



Rory McPhillips CEnvP SC, Principal Environmental Scientist

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56 William Street, Abbotsford, VIC. 3067 Telephone: (03) 9429 6955 Fax: (03) 9429 5911 Mobile: 0412 000 445
Web: www.atmaenvironmental.com

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Acronyms & Units

ABC	Ambient Background Concentration
ACL	Added Contaminant Limits
ACM	Asbestos Containing Materials
ADWG	Australian Drinking Water Guidelines
agl	Above Ground Level
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment Conservation Council
ARMC ANZ	Agriculture and Resource Management Council of Australia and New Zealand
AS	Australian Standard
ASLP	Australian Standard Leaching Procedure
ASS	Acid Sulphate Soil
AST	Aboveground Storage Tank
B(a)P	Benzo(a)Pyrene
bgl	Below ground level
BH	Borehole
BPEM	Best Practice Environmental Management Siting, Design, Operation and Rehabilitation of Landfills
BTEX	Benzene, toluene, ethylbenzene, xylenes
BTEXN	Benzene, toluene, ethylbenzene, xylenes, naphthalene
btoc	Below top of casing
CCME	Canadian Council of Ministers for the Environment
CEC	Cation Exchange Capacity
CHC	Chlorinated Hydrocarbons
COC	Chain of Custody
COPC	Contaminant of Potential Concern
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual Site Model
CUN	Clean up Notice
CUTEP	Clean up to the Extent Practicable
DELWP	Department of Environment, Land, Water and Planning
DNAPL	Dense Non-Aqueous Phase Liquid
DO	Dissolved Oxygen
DQO	Data Quality Objectives
DSE	Department of Sustainability and Environment
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EIL	Ecological Investigation Level
EMP	Environmental Management Plan
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
ESL	Ecological Screening Level
GIL	Groundwater Investigation Levels
GME	Groundwater Monitoring Event
GQRUZ	Groundwater Quality Restricted Use Zone

meq	Milliequivalents
mg	Milligram
mg/kg	Milligram per Kilogram
mg/L	Milligram per Litre
mg/m^3	Milligram per cubic meter
MGA	Map Grid of Australia
mm	Millimetre
MMBW	Melbourne Metropolitan Board of Works
MW	Monitoring well
N	Nitrogen
N/A	Not Applicable
NAPL	Non-Aqueous Phase Liquid
NATA	National Association of Testing Authorities
ND	Non-Detectable
NDD	Non-Destructive Digging
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
OCP	Organochlorine Pesticides
OPP	Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbon
PAN	Pollution Abatement Notice
PASS	Potential Acid Sulphate Soil
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
PCPAN	Post Closure Pollution Abatement Notice
PESA	Preliminary Environmental Site Assessment
pH	Potential Hydrogen
PID	Photo-ionisation Detector
PIW	Prescribed Industrial Waste
ppm	Parts per million
PSI	Preliminary Site Investigation
PSR	Priority Sites Register
QA/QC	Quality Assurance / Quality Control
RL	Reduced Level
RPD	Relative Percentage Difference
SAQP	Sampling, Analysis & Quality Plan
SCMP	Site Contamination Management Plan
SEPP	State Environment Protection Policy.
SRW	Southern Rural Water
SVOC	Semi-Volatile Organic Compounds
SWL	Static Water Level
TCE	Trichloroethylene

GSV	Gas Screening Value
GW	Groundwater
Ha	Hectares
HHRA	Human Health Risk Assessment
HIL	Health Investigation Level
HSL	Health Screening Level
IWRG	Industrial Waste Resource Guidelines
kg	Kilogram
km	Kilometre
L	Litre
LFG	Landfill Gas
LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of Reporting
m	Metre
MAH	Monocyclic Aromatic Hydrocarbons
mbgl	Metres Below Ground Level
TDS	Total Dissolved Solids
TEQ	Toxic Equivalence Quotient
TIT	Triple Intercept Trap
TOC	Top of Casing
TP	Test Pit
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
µg/m^3	Micrograms per cubic meter
UPSS	Underground Petroleum Storage Systems
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
Vic	Victoria
VOC	Volatile Organic Compound
VVG	Visualising Victoria's Groundwater
WHO	World Health Organisation

EXECUTIVE SUMMARY

The site, identified as part of 20 Wangara Road, Sandringham, Victoria, was previously used as a quarry and later as a municipal landfill (from at least 1968 to circa 1976). Development of indoor netball courts is proposed at the site, which will form part of a larger development that will include outdoor netball courts and associated amenity.

An assessment of potential landfill gas risks to the proposed indoor netball court was requested to determine if ground gas is present at the site and what (if any) further assessment or gas mitigation is required prior to re-development and construction.

The investigation included a review of previous reports (environmental and geotechnical), a surface methane survey and installation and monitoring of three soil gas bores in the immediate vicinity of the proposed indoor netball courts and within the landfill waste mass. The fill material encountered during drilling generally consisted of sands with some silts, clays and gravels and various quantities of admixed waste including: steel, plastic, brick and glass fragments. No saturated soil conditions were encountered and drilling was terminated in natural soils comprising of silts and clays with some sands. No suspect asbestos containing material or putrescible waste was identified.

The depth of the monitoring bores was determined based on the depth of the waste mass, in order to intercept any potential gas migrating through the subsurface. A screened interval was installed at each location from approximately 1.0 below ground to the maximum depth of the bore.

Three rounds of methane emission surveys were completed across the surface of the site and within offsite spot checks/subsurface pits; low concentrations of methane were recorded, but greatly below the relevant BPEM action levels.

Four discrete monitoring events were undertaken at the sub-surface bores using a calibrated portable landfill gas monitor (GA5000) and three weeks of continuous in-situ gas monitoring was completed at one location using a GasClam.

Steady methane was detected at all locations which consistently exceed the EPA BPEM action level of 1.0 % v/v CH_4 above background:

- 35.2 to 53.8 % v/v at LFG01;
- 37.5 to 62.0 % v/v at LFG02;
- 0.0 to 11.6 % v/v at LFG03.

Steady carbon dioxide was detected at all locations which consistently exceed the EPA BPEM action level of 1.5 % v/v CO_2 above background:

- 13.3 to 13.1 % v/v at LFG01;
- 15.0 to 19.0 % v/v at LFG02;

- 5.6 to 15.5 % v/v at LFG03.

Depleted oxygen concentrations were consistently reported at LFG01 & LFG02 with concentrations raging between 0.0 to 1.1 % v/v. Variable oxygen concentrations at LFG03 ranged between 1.0 – 15.7 % v/v.

Given the consistently zero (or negative) gas flow rates, the worst possible GSV is zero for methane and carbon dioxide. Using the Wilson & Card approach, the site is defined as 'Low Risk' ('Characteristic Situation 2').

For 'Characteristic Situation 2', either one or two levels of gas protection are required for commercial/industrial type buildings. In accordance with Table 8.6 of CIRIA C665, protection measures could include:

1. Reinforced concrete cast in-situ floor slab (suspended, non-suspended or raft) with minimum 1,200 g Damp Proof Membrane (all joints and penetrations sealed).
   OR,
2. Block and beam or precast concrete slab and minimum 2,000 g Damp Proof Membrane /or reinforced gas membrane (all joints and penetrations sealed), and
3. Possibly underfloor venting or pressurisation in combination with 1 or 2 above, depending on use.

However, the Wilson & Card Characteristic Situations are primarily driven by the GSVs, which in this case are zero due to the absence of positive gas flow. Given the development is proposed on top of the waste mass, it is considered that the maximum gas concentrations should be given more relevance. As a sensitivity check, the results have also been compared against the NHBC Traffic Light approach (typically applied for low rise housing with suspended floor slabs and ventilated underfloor void), which based on the typical maximum methane concentrations, suggests a 'Red' traffic light situation (high gas regime identified).

It is concluded that continued landfill gas generation does pose a potential risk to the proposed development and that risk mitigation measures will be required; however, in keeping with advice provided by EPA Victoria and guidance provided in EPA Publication No. 1642 ("Assessing planning proposals within the buffer of a landfill"), the advice previously provided by Geoaquitards and given the significantly elevated concentrations of methane and carbon dioxide, it is recommended that the Responsible Authority advise the EPA on the outcomes of this assessment and confirm if an Environmental Audit under Section 53V of the Environment Protection Act 1970 is required for the proposed development

Further, in the absence of any previous assessment, we recommend that an offsite investigation also be considered to assess the potential migration of landfill gas beyond the site boundaries, in particular towards the residential properties immediately west of the site. As identified in Section 4.5, a drainage easement traversing the landfill site and extending directly to the nearby residential properties was identified, which poses a direct preferential pathway for off-site gas migration.

1 INTRODUCTION

Atma Environmental Pty Ltd (Atma Environmental) was engaged by A.S. James Pty Ltd (the client) to undertake a LFG Risk Assessment at part of 20 Wangara Road, Sandringham, Victoria (i.e. the site).

Development of indoor netball courts is proposed at the site which will form part of a larger development that will include outdoor netball courts and associated amenity. The Concept Masterplan (Option 2) is included in Appendix A. We understand that the site was previously used as a quarry and later as a municipal landfill.

An assessment of potential landfill gas risks to the proposed indoor netball court on the site has been requested.

2 OBJECTIVES AND SCOPE OF ASSESSMENT

2.1 Assessment Objective

The objective of the LFG Risk Assessment was to determine if ground gas is present at the site and what (if any) further assessment or gas mitigation is required prior to re-development and construction of the indoor netball courts.

2.2 Scope

This assessment was commissioned by A.S. James Pty Ltd in accordance with our proposal Q18-3090.1 dated 12th January 2019. As per the proposal, the scope of work included:

- Review of site and source area geology, hydrogeology, physical site setting;
- Source characterisation and estimation of gas generation potential;
- Review of site development plans;
- Identification of credible gas migration pathways;
- Inspection of site and surrounding area for evidence of landfilling/ground gas emissions and credible pathways;
- Installation of 3 x gas monitoring bores to the depth of filling;
- Logging of waste mass and soil profile;
- Leak testing of the bore installations;
- Four separate rounds of discrete ground gas monitoring*;
- Continuous in-situ gas monitoring using a 'GasClam' over a period of one month;
- Three separate rounds of ground surface methane monitoring during;
- Reporting of findings, methods, conclusions, and recommendations for mitigation measures and/or further assessment, as required.

*It is noted that six rounds of discrete ground gas monitoring was originally proposed, however, given the relatively consistent results obtained from the four rounds completed, the

final two rounds were not considered necessary.

A site history review, investigation of off-site LFG risks and investigation of soil/groundwater/leachate/volatile vapours, did not form part of the requested scope of work.

3 BACKGROUND INFORMATION

A summary of previous reports is provided below, a complete copy of each report is provided in Appendix D.

Geoaquitards Environmental Pty Ltd, *"Environmental Due Diligence Assessment, Sandringham Golf Course, 20 Wangara Road, Sandringham"*, July 2017

Bayside City Council commissioned this assessment which included a brief historical review, soil sampling from 85 borehole locations (to a maximum depth of 3.1 m), laboratory analysis and reporting.

The findings of the assessment are summarised below:

- At the time of the assessment, the site was used as a golf driving range.
- The natural geology at the site was expected to consist of inland dune deposits (silts, sands, clays).
- The site was historically the Sandringham Council Tip (garbage) between at least 1968 and 1976, although the start and end operational dates were unknown.
- The 1976 Melway Directory shows the site as 'Wangara Reserve'.
- An aerial photograph from 1981 shows the site was a vacant grassed area.
- Since 1986, the site had been continuously used as a golf driving range.
- The area had been historically located within an area of market gardening (1870s – 1950s) and sand pits (1950 – 1955).
- Since 1953, the land to the immediate east had been used as a cemetery.
- Boreholes 8, 37, 38, 44, 45 & 46 were positioned within the proposed footprint of the indoor netball courts (i.e. the site) and typically comprised fill materials comprising sands/silts/clays with gravels, bricks, landfill rubbish, plastic, glass and putrescible (landfill) odours from depths 0.5 m bgl. The full fill profile was not penetrated and natural soils were not encountered.
- PID results were typically 0.0 ppm, which is not indicative of volatile organic contamination
- Laboratory results reported the following:
    - Various locations/depths reported high concentrations of arsenic, cadmium, copper, nickel, tin, zinc, benzo(a)pyrene and TRH C16 – C34 that exceeded the adopted human health and/or ecological assessment criteria.
    - At the site, the only exceedance was at borehole 46 (depth of 1.0 m bgl) where tin exceeded the adopted ecological criteria.
    - Asbestos was reported at Borehole 39, located to the immediate east of the site

boundary.

- The site was considered to preclude the beneficial uses for human health, ecosystems, aesthetics and production of food, flora and fibre and recommended further consultation with EPA prior to any future development.
- Given that the site previously operated as a tip (i.e. landfill), it was recommended that further advice by sought from EPA for the consideration of any development at the site.

EnRisks Pty Ltd, *"Human Health and Ecological Risk Assessment"*, June 2018

Based on the outcomes of the 2017 Geoaquitards Environmental assessment (i.e. presence of contamination in the surface soil), Bayside City Council commissioned a human health and ecological risk assessment to quantify the potential risks associated with the proposed construction of netball courts.

The findings of the assessment are summarised below:

- The elevated contaminant concentrations reported in surface soil that may remain accessible to future recreational users of the site, were of no concern in relation to risks to human health;
- The elevated contaminant concentrations reported in soil that may be disturbed during the proposed development or during future intrusive works, were not of concern in relation to risks to the health of workers.
- It was noted that any excavations that are required to extend into the landfill waste materials would require an environmental management plan to address the excavation and management of waste, generation of odours and minimise direct contact exposures by workers.
- The concentrations reported in soil that may be of relevance to future terrestrial environments on the site, were not considered to be of concern to ecological health.
- It was noted that the site was historically a landfill and no assessment of landfill gas had been undertaken.

A.S. James Pty Ltd, *"Geotechnical Investigation – Proposed Netball Courts, 20 Wangara Road, Sandringham"*, November 2018

To assist in the foundation design and construction of the proposed netball courts at the site, a geotechnical investigation was completed which consisted of drilling 25 boreholes to variable depths (maximum depth of 15.0 m).

The relevant findings of the investigation are summarised below:

- The land (including the site) was previously used as a quarry and as a landfill for municipal waste.
- Other than the variable depths of fills known to be present, the natural site geology was expected to be part of the Brighton Group comprising sands, silts and clays.

- At the time of the investigation, the site was used a golf driving range.
- The site was elevated compared to the surrounding locality (due to the landfill) with the embankments estimated to be 3-4 metres in the northern section and 6-8 m in the southern section.
- Borehole D9 was the only location positioned within the proposed footprint of the indoor netball courts (i.e. the site) and typically comprised variable silty sands and sandy clays fill materials to 8.5 m with fragments of metal and brick observed. The underlying natural soils comprised sandy clay to a depth of 12.0 m.
- The drilling program indicated a capping layer (0.4 – 3.1 m) comprising silty sand with gravels overlaying variable fill soils (5.5 to 8.5 m) with waste materials comprising plastic, rags, metal scraps, tin cans, concrete, wire, brick fragments, glass and wood.
- Groundwater was encountered at depths ranging between 11.5 and 14.0 m.
- It was noted that a landfill gas analysis would be completed at a later date, however the report commented that based on the low levels of organic/chemical waste encountered, the age of the landfill and the relatively permeable capping layer, it was not expected that the results would be within harmful levels.
- If significant amounts of landfill gas (i.e. methane) was revealed, a gas collection layer design was recommended.

Hard Rock Geotechnical Pty Ltd, "*Desk Study of Sandringham Driving Range – Wangara Road, Sandringham",* February 2018

A desk study was limited to a review of online maps, historic Melbourne Metropolitan Board of Works (MMBW) sewer plans and aerial photographs. The relevant findings of the study are summarised below:

- Natural site geology was expected to consist of the Tertiary "Brighton Group" formation which was noted to typically provide a good source of sand and clayey sand which was quarried.
- No MMBW plans were available.
- Aerial photographs ranging between 1945 and 1978 indicated:
    - Quarrying activities between 1945 and 1968;
    - The site was filled (with 'uncontrolled fill') and completed by 1978;
    - The margins of the quarry appeared erratic with deep borrow pits down to the groundwater table evident;
    - The depth to groundwater was less than 5.0 m and was considered to give some indication as to the depth of the quarrying activities.

Civil Test Pty Ltd, "*Geotechnical Investigation at Sandringham Golf Driving Range",* January 2015

Bayside City Council commissioned this investigation to establish the subsurface soil conditions and recommend on any special treatment that may be required to convert the existing site into a netball court. The limited scope investigation consisted of drilling 11 boreholes to a maximum depth of 4.0 m.

The relevant findings of the investigation are summarised below:

- Borehole BH8 was the only location positioned within the proposed footprint of the indoor netball courts (i.e. the site) and typically comprised fill materials to 1.5 m and comprised silty sands with fragments of gravels and clay pieces observed. The underlying natural soils comprised sandy clay to a depth of 12.0 m.
- The drilling program identified variable quantities of rubbish throughout the fill profile.
- Natural soils were not encountered.

4 SITE SETTING

4.1 Regional Setting & Site Identification

The site is situated in Sandringham, approximately 17 kilometres south-east of Melbourne's central business district. The site forms part of a larger site identified as 20 Wangara Road and is currently used as a golf driving range/golf academy. Land uses directly adjacent to the site consist of residential properties (west), a cemetery (east) and industrial (north and south). General information about the site is listed below:

Local Government ……..	Bayside City Council
Lot & Plan No……....	Lot 1 PS727384
Zoning……	Public Park & Recreation Zone

The site is not affected by an Environmental Audit Overlay. Figure 1 shows the site details and the immediately surrounding area.

4.2 Topography

The site is located approximately 38 m asl and is predominantly flat. The site is situated within an area of made ground which has a maximum height of approximately 38 m asl. The made ground is elevated above the surrounding area which is typically 33 m asl. Based on the reported depth of fill at the site (8.5 m), the fill is expected extend to approximately 29.5 m asl. A map showing the local and regional area topography is provided in Appendix A.

4.3 Geology

According to the *Visualising Victoria's Groundwater* (VVG) (FedUni, 2017), the site is underlain by Red Bluff Sandstone (Brighton Group). An online extract of the *Visualising Victoria's Groundwater* geology map is provided in Appendix A.

4.4 Hydrogeology & Surface Water

According to the VVG website, the groundwater is reportedly encountered at approximately 5-10 m below the natural ground level. Refer to Appendix A for the estimated groundwater depth map from VVG. Groundwater was encountered during previous investigations at depths ranging between 11.5 and 14.0 m below the site level.

4.5 Underground Services

Subsurface services may pose a preferential pathway for landfill gas migrating from the site to surrounding areas. A Dial Before You Dig (DBYD) underground services check was conducted (with plans provided in Appendix A). The area covered by the search included the site and surrounding land.

DBYD searches do not show subsurface utilities on private land, however, findings are summarised below:

- Water: an easement and 1200 mm diameter drainage pipeline are located approximately 40 m to the south and are orientated diagonally through the southern section of the driving range. This pipeline connects to the west and south-east of 20 Wangara Road. Water pipelines are also located in the road reserved along Wangara Road, George Street and Talinga Road. No recycled water infrastructure is shown.
- Sewer: shares the water easement, although no pipework is shown to extend through 20 Wangara Road. Sewer pipelines are also located in the road reserved along Wangara Road, George Street and Talinga Road.
- Energy: low-voltage aboveground cables are located along George Street and Talinga Road. High Voltage aboveground cables are located along Wangara Road.
- Gas: a high pressure gas line (100 to 515 kPA) is located in the road reserved along Wangara Road, George Street and Talinga Road.
- NBN: in-service cable/duct/trench and pits/manholes are shown in the map along west side of George Street and the south side of Talinga Road.

The DBYD plans do not show any significant underground infrastructure traversing the site or directly connecting the site to nearby residential properties. However, the drainage pipeline located within the easement to the south (potentially located within the landfill mass beneath the golf driving range) directly connects to the nearby residential properties.

4.6 Proposed Development Plan

In accordance with the Concept Masterplan – Option 2 (Michael Smith & Associates, 2018), it is proposed to construct a three court indoor netball stadium at the site and will form part of a larger netball court complex including outdoor courts, car parking and landscaping. The Masterplan does not provide detail of the construction type, enclosed spaces or services. The Concept Masterplan is provided in Appendix A.

5 SITE INSPECTION

Kyle O'Brien from Atma Environmental visited the site on 4th February 2019. Photographs are provided in Appendix B. At the time of the visit, the site formed part of a golf driving range which included (not on the site) a club house, tee off area, car park, maintenance sheds and an office building. The main findings are summarised below:

Surfacing & Perimeter Conditions

The site surface was mainly grassed and uneven, with large areas of bare patches and extremely dry/stressed grass. The perimeter of the site was undefined and part of the larger driving range complex. The site was situated on the plateau of a significantly filled area with steeply sloping embankments which connected to the surrounding lower lying areas.

Solid Wastes, Hazardous Substances and Asbestos

No evidence of general wastes or other materials being dumped onsite was observed.

Underground Storage Tanks

The site was inspected for fill points, fuel pumps, vent lines and related infrastructure. No evidence of underground storage tanks was noted onsite. No septic tanks were noted.

Offensive Odours/Emissions

Weather conditions during the site inspection were fine and sunny. No offensive odours were noted and no potential sources of offensive odours (e.g. hydrogen sulphide or landfill waste odours, etc.) were identified onsite or in the proximity of the site.

Other Observations

- No soil staining was noted during the inspection and no saturated conditions were found onsite.
- No service pits, buildings or structures are located on the site.
- No livestock was present at the time of the inspection.
- No surface water features were observed onsite.

6 CONCEPTUAL SITE MODEL

Based on the previous reports, the site setting review and the site inspection, a preliminary conceptual site model has been developed:

Site History & Physical Setting:

- The site is located within an area of historical market gardening (1870s – 1950s) and sand pits (1950 – 1955).
- The site has historically been used as a sand quarry (circa 1945 to 1968).
- The site was then a municipal landfill that accepted putrescible waste from at least 1968 to circa 1976, although it is unknown exactly when the landfill closed.
- The site has since been parkland, later used as a golf driving range (current use).
- The landfilling has resulted in the site being raised above the surrounding natural ground level, with the embankments of the landfill ranging between 3.0 – 8.0 m above ground level.
- The natural underlying geology comprises Brighton Group sandy clays.
- Groundwater is expected to be approximately 5 – 10 meters below the natural ground surface and was encountered during previous investigations at depths between 11.5 and 14.0 m below the (raised) site level.

LFG Source, Generation Potential & Migration Pathways:

- 20 Wangara Rd (including the site) was a municipal landfill, accepting putrescible wastes from at least 1968 to circa 1976.
- Previous investigations have found an informal (not engineered) capping layer (0.4 – 3.1 m thick) comprising silty sand with gravels.
- The depth of the underlying landfill mass is variable, ranging from 5.5 to 8.5 m and comprises sands/silts/clays with plastic, rags, metal scraps, tin cans, concrete, wire, brick fragments, glass and wood, with putrescible (landfill) odours from depths 0.5 m bgl.
- The waste mass is likely to extend below the depth of the surrounding natural ground level.
- Groundwater is present below the depth of the waste mess.
- According to Table 3.1 in the "*Ground Gas Handbook*" (2009), municipal landfill sites that were filled from the mid 1960s to early 1990s, present a **moderate to very high LFG generation potential**, a moderate to very high risk for onsite development and a moderate to very high risk of lateral LFG migration.
- The proposed onsite indoor netball courts will be located on top of the waste mass and therefore vertical LFG migration into the building is plausible.
- Also, LFG could migrate into the building through underground services installed in the waste mass to service the proposed building.
- A drainage pipeline is located within an easement to the south of the site but within the former landfill boundary (and is potentially located within the landfill mass) and it directly connects to the nearby residential properties, which is potentially acting as a prudential pathway for off-site landfill gas migration.

Receptors & Hazards:

- With respect to the site, future receptors include the staff and users of the proposed

indoor netball courts.

- Hazards posed to the receptors by migration of landfill gas to the site *potentially* include:
  - Damage to buildings (e.g. explosion);
  - Effect on human health (via explosion); and
  - Effect on human health (e.g. asphyxiation/odour).

7 LANDFILL GAS INVESTIGATION

To assess the potential risks to the proposed indoor netball courts from landfill gas, monitoring of surface and sub-surface landfill gas was completed and is documented in the following sections.

7.1 Assessment Criteria

The EPA Victoria Publication 788.3 '*Best Practice Environmental Management - Siting, Design, Operation and Rehabilitation of Landfills*' (August 2015) (BPEM) provides guidance on the design of landfill gas monitoring bore systems.

The BPEM is the source for best practice environmental management measures for landfills and aims to provide existing and future operators of landfills, planning authorities and regulating bodies with information on potential impacts of landfills, a clear statement of environmental performance objectives, and information on how to avoid or minimise environmental impacts. The BPEM is intended for the management of existing and future landfill sites. Although these criteria technically apply to current landfills, it is considered that the guidance is also applicable at closed landfill sites and areas surrounding them.

The action levels established in the BPEM (refer to Table A below) are not risk-based criteria and do not take into consideration the gas flow rate (i.e. the potential for gas to migrate through the ground). The BPEM does not provide a rationale for the action levels, although the criteria are understood to be based upon a conservative consideration of the hazards (explosion and asphyxiation) posed by gases in a confined space.

Table A. EPA Landfill Gas Action Levels (BPEM)

Location	Parameter(s)	Action level and unit
Landfill surface final cap	Methane	100 ppm
Within 50 mm of penetrations through the final cap	Methane	100 ppm
Landfill surface intermediate cover areas	Methane	200 ppm
Within 50 mm of penetrations through the intermediate cover	Methane	1,000 ppm
Biofilters	Methane flux	1.0g/m^2/hr
Subsurface geology at the landfill	Methane and carbon	1% v/v methane or 1.5% v/v carbon

Location	Parameter(s)	Action level and unit
boundary	dioxide	dioxide above background
Subsurface services on and adjacent to the landfill site	Methane	10,000 ppm methane (1% v/v)
Building/structures on and adjacent to the landfill site	Methane	5,000 ppm
Landfill gas flares	Methane and VOCs	98& destruction efficiency

To comment on the potential risk posed from landfill gas, risk-based assessment criteria from the following United Kingdom industry guidance documents are also referenced:

- British Standard *"Code of practice for the characterisation and remediation from ground gas in affected developments'* (BS 8485:2007).
- United Kingdom Construction Industry Research and Information Association (CIRIA) Report C665 *"Assessing risks posed by hazardous ground gases to buildings (revised)"* 2007.
- Wilson et. al. *"Ground Gas Handbook"* Whittles Publishing 2009.

The risk-based assessment approach determines Gas Screening Values (GSVs) using the borehole flow rates and gas concentrations to determine a specific site 'Characteristic Situation' (gas hazard risk) for the site.

Wilson et al (2009) recommends CIRIA C665 'Situation B' NHBC approach for low rise housing with suspended floor slabs and ventilated underfloor void and CIRIA 665 'Situation A' (based on a revised Wilson and Card 1999) for all other development types.

The determined Characteristic Situation is then used in accordance with Table 8.6 and Box 8.4 of CIRIA C665, to determine what gas protection measures, if any, are required for the proposed site development.

7.2 Methane Emissions Survey

7.2.1 Methodology

A surface emission survey was undertaken at the site in accordance with the recommendations and considerations provided in the Landfill Gas Fugitive Emissions Monitoring Guideline (Publication 1684, EPA 2018). The survey was conducted following a pre-established grid covering the area of the site, with a 14 m spacing between each interval. A subsurface surfaces and surface 'spotcheck' methane emissions surface was also completed in and around the driving range building located to the north and within the mass waste. Refer to Figure 1 for the methane survey locations.

The surveys were conducted using a portable INSPECTRA® Laser Analyser calibrated for methane. The device pump was operated at Speed 1 (35 l/h) (vs. Speed 2 at 70 l/h) to reduce the risk of dilutions and small leaks. The device displays methane concentration in parts per

million and in percent (%) when readings exceeded 20,000 ppm. Refer to Appendix C for the Inspectra Laser Analyser calibration certificates.

Ideally, the survey should be completed during low and/or falling atmospheric pressure conditions. Table B summarises the survey dates and atmospheric conditions. However, with the site located in the hitting zone of the golf driving range, fieldworks were limited to Monday mornings; when the opening hours were delayed for maintenance works. As such, timing the works for ideal atmospheric conditions was not possible.

Rounds 1 & 2 were undertaken during periods of high and increasing atmospheric pressure and Round 3 was undertaken during falling atmospheric pressure. Refer to Appendix C for weather observations from the Bureau of Meteorology.

Table B: Methane Emissions Survey Information

Round	Date	Survey Locations	Atmospheric Conditions		
			Pressure (mB)	∆Pressure (mB)[A]	Weather
1	4/03/19	Grid	1018	6 mb (increase)	Overcast, humid, slight breeze, 21ºC
2	18/03/19	Grid, off-site	1016	3 mb (increase)	Sunny, windy, 20ºC
3	15/04/19	Grid	1019	3.5 mb (decrease)	Overcast, mild, no breeze 15ºC

[A] Data calculated from Moorabbin Airport Station (located 6 km to east) for the day of and the preceding day of the monitoring round

Measurements were taken by holding the monitoring point connected to the instrument within five centimetres of the ground surface for a period of six to ten seconds and recording the highest stable reading. The monitoring in off-site underground pits was completed using a thin wand attached to the Laser Analyser, inserting it in (generally) closed pits for a nominal six seconds and recording the highest stable reading.

7.2.2 Emission Survey Results

Results from the surface grid across the site and the offsite spot checks/subsurface pits, found low concentrations of methane in the range of 0.6 to 5.7 ppm, much less that the EPA BPEM action level of 100 ppm for the landfill surface. Notably, the measures concentrations were typically higher during the third monitoring round, completed during falling atmospheric pressure. Refer to Table 1 for results of the methane fugitive emissions survey.

7.3 Landfill Gas Monitoring Bore Installation

Atma Environmental installed three LFG monitoring bores (LFG01 – LFG03) between 4th and 11th February 2019, in the immediate vicinity of the proposed indoor netball courts and within the waste mass. Refer to Figure 1 for the locations of the landfill gas bores.

All drilling and bore construction was performed by A.S. James Pty Ltd under the supervision of an Atma Environmental consultant. The depth of the LFG monitoring bores was determined based on the depth of the waste mass, in order to intercept any potential gas migrating through the subsurface.

The fill material encountered during drilling generally consisted of sands with some silts, clays and gravels and various quantities of admixed waste including: steel, plastic, brick and glass fragments. No saturated soil conditions were encountered and drilling was terminated in natural soils comprising of silts and clays with some sands.

Other notable observations during drilling of the landfill gas bores included:

- At LFG01, sweet odours were detected at 3.0 m bgl and minor hydrocarbon odours were detected at 3.8 m bgl.
- At LFG02, minor hydrocarbon odours were detected between 1.0 and 1.5 m bgl.
- No suspect asbestos containing material or putrescible waste (which would present a high potential for gas generation) was identified.

Monitoring bore screens consisted of 50 mm diameter, Class 18 PVC with 3 mm slots. Rounded washed-gravel (5-10 mm) was used for the filter pack. To seal each screen, bentonite clay was installed to the surface. Large monument covers were installed over the landfill gas bores for protection. A gas valve cap was then attached to the top of the standpipe at each location for gas monitoring.

The bore installation details are provided in Table C.

Table C: Landfill Gas Bore Details

Soil Gas Bore ID	Total Depth (m bgl)*	Screened Interval (m bgl)	Depth of Fill Material (m bgl)	Depth Groundwater Intersected During Drilling (m bgl)
LFG01	9.0	1.0 – 8.5	0.0 - 8.0	n/a
LFG02	9.0	1.2 – 9.0	0.0 - 8.5	n/a
LFG03	9.0	1.0 – 8.5	0.0 - 8.0	n/a

*m bgl means metres below ground level

Refer to Appendix C for detailed landfill gas bore installation logs.

Leak testing was completed following the installation of the LFG monitoring bores using an isopropanol (IPA) shroud around the bore. The bores were purged with a PID to check for leaks; the steady PID readings suggest that the bore and fittings were airtight.

7.4 Gas Bore Monitoring Methodology

All ground gas sampling was undertaken in accordance with Atma Environmental's 'Ground Gas Monitoring Procedure' which is based on the Landfill Gas Fugitive Emissions Monitoring Guideline (Publication 1684, EPA 2018).

7.4.1 Discrete Monitoring Events

Four discrete monitoring events were undertaken using a calibrated portable landfill gas monitor (GA5000). Table D summarises the monitoring dates and atmospheric conditions.

Table D: Discrete Gas Bore Monitoring Details

Round	Date	Atmospheric Conditions		
		Pressure (mB)	∆Pressure (mB)[A]	Weather
1	4/03/19	1018	6 (increase)	Overcast, humid, slight breeze, 21ºC
2	18/03/19	1016	3 (increase)	Sunny, windy, 20ºC
3	1/04/19	1024	14.5 (increase)	Overcast, mild, 14ºC
4	15/04/19	1019	3.5 (decrease)	Overcast, mild, no breeze 15ºC

[A] Data calculated from Moorabbin Airport Station (located 6 km to east) for the day of and the preceding day of the monitoring round

Due to site access restrictions, monitoring was restricted to Monday mornings and was not necessarily completed during low/falling atmospheric pressure conditions.

(Refer to Appendix B for photographs of the monitoring events and to Appendix C for the GA5000 calibration certificates). Field-measured parameters included:

- Atmospheric pressure,
- Relative bore pressure,
- Borehole flow rate,
- Methane (CH_4),
- Carbon dioxide (CO_2),
- Oxygen (O_2),
- Hydrogen sulphide (H_2S),
- Carbon monoxide (CO), and
- Balance.

Directly after monitoring, a calibrated PID (with 10 eV lamp) was attached to the monitoring point at each bore to measure the presence of volatile vapours, then the airtight gas-valve caps were removed to allow gauging for groundwater within the bores. Caps were replaced immediately after inspection.

7.4.2 Continuous In-Situ Monitoring

Results from the first round of discrete monitoring indicated bore LFG02 as showing the most elevated concentrations of ground gas (CH_4 and CO_2) and low oxygen. This location was therefore chosen for continuous in-situ monitoring using the GasClam device.

The GasClam device allows frequent monitoring of a borehole (up to once a minute) for an extended period. This provides a thorough data set showing gas readings over a range of atmospheric pressures. Field parameters measured by the GasClam included:

- Atmospheric pressure,
- Relative bore pressure,
- Temperature,
- Methane (CH_4),
- Carbon dioxide (CO_2),
- Oxygen (O_2),
- Hydrogen sulphide (H_2S),
- Carbon monoxide (CO), and

The GasClam was set to record one reading per hour from 18 March to 15 April 2019; however, a flow error occurred on 7th April 2019 and monitoring ceased.

Refer to Appendix C for the GasClam calibration certificate.

7.5 Gas Bore Monitoring Results

A summary of the discrete and continuous gas monitoring results is provided on the Tables 2 and 3.

7.5.1 Methane

Methane was detected at all locations and Table E summarises the results from the GA5000.

Table E: GA5000 Methane Results

Round	Methane Concentrations (*peak* / steady % v/v)					
	LFG01		LFG02		LFG03	
1	*44.9*	*44.8*	*45.8*	*45.8*	*43.1*	*7.9*
2	*53.9*	*53.8*	*55.3*	*55.1*	*9.1*	*4.0*

3	*37.1*	*35.2*	*38.4*	*37.5*	*4.9*	*0.0*
4	*51.9*	*51.8*	*54.3*	*51.5*	*16.4*	*11.6*

GasClam data for LFG02 recorded methane ranging between 44 and 62 % v/v and the concentrations are generally consistent with the discrete monitoring events using the GA5000.

Measured methane concentrations at the site consistently exceed the EPA BPEM action level of 1.0 % v/v CH_4 (set for subsurface geology at a landfill boundary).

7.5.2 Carbon Dioxide

Carbon dioxide was detected at all locations and Table F summarises the results from the GA5000.

Table F: GA5000 Carbon Dioxide Results

Round	Carbon Dioxide Concentrations (*peak* / steady % v/v)					
	LFG01		LFG02		LFG03	
1	*14.2*	*14.1*	*16.0*	*15.9*	*12.3*	*11.3*
2	*13.3*	*13.3*	*16.4*	*16.3*	*9.1*	*8.5*
3	*16.2*	*16.1*	*15.0*	*15.0*	*6.1*	*5.6*
4	*13.3*	*13.3*	*16.1*	*16.1*	*15.9*	*15.5*

GasClam data for LFG02 recorded carbon dioxide ranging between 16 and 19 % v/v and the concentrations are generally consistent with the discrete monitoring events using the GA5000.

Measured methane concentrations at the site consistently exceed the EPA BPEM action level of 1.5 % v/v CO_2 above background (set for subsurface geology at a landfill boundary).

7.5.3 Trace Gases

Hydrogen Sulphide

From the discrete monitoring rounds, hydrogen sulphide concentrations ranged between 0.0 and 1.0 ppm in all bores.

GasClam data for LFG02 recorded hydrogen sulphide concentrations ranging between 0 and 3 ppm and the concentrations are generally consistent with the discrete monitoring events using the GA5000.

Carbon Monoxide

From the discrete monitoring rounds, Carbon Monoxide concentrations ranged between 1 and 8 ppm in all bores.

GasClam data for LFG02 recorded Carbon Monoxide concentrations ranging between 4 and 16 ppm and the concentrations are generally similar with the discrete monitoring events using the GA5000.

Oxygen

Depleted oxygen concentrations were consistently reported at LFG01 & LFG02 with concentrations raging between 0.0 to 1.1 % v/v. Variable oxygen concentrations at LFG03 ranged between 1.0 – 15.7 % v/v.

GasClam data showed oxygen at location LFG02 consistently 0 % v/v (354 times out of 369 readings) and a maximum of 1.1 % v/v and the concentrations are generally consistent with the discrete monitoring events using the GA5000.

Volatile Vapours

PID results ranged between 0.0 (LFG03; Round 1) to 61.2 ppm (LFG01; Round 2), and may be indicative of the presence of low-level volatile vapours (LFG01 & LFG02 only). LFG03 consistently reported result below 1.0 ppm suggesting that high concentrations of volatile vapours are not present at this location.

Odours

Offensive landfill odours were consistently detected at LFG01 & LFG02 when the gas valve cap was removed following monitoring. Odours were not detected at LFG03.

7.5.4 Borehole Flow Rates

Flow rates were measured using the GA5000 (internal flow meter) during each discrete monitoring round.

Measurable steady borehole flow rates ranged between 0.0 L/hr (all bores) and -0.2 L/hr (LFG03; Round 4). The results indicate minimal gas flowing through the subsurface of the site.

7.5.5 Atmospheric Pressure

The four discrete monitoring rounds completed by Atma Environmental were generally completed during high and increasing atmospheric pressures (Rounds 1 to 3) and falling atmospheric pressures (Round 4). Refer to Appendix B for weather observations from the

Bureau of Meteorology.

Atmospheric pressures recorded by the GasClam during the monitoring period ranged from 994 to 1021 mb, representing a large variation in pressure systems.

Figure A plots the changes in methane, carbon dioxide, oxygen and flow rates recorded at LFG02 with the GA5000, against changes in atmospheric pressure. The graph does not show obvious trends, although it could be perceived that methane concentrations increase slightly with decreasing atmospheric pressure and decrease with increasing atmospheric pressure.

Figure B plots the changes in methane, carbon dioxide and oxygen concentrations recorded at LFG02 with the GasClam, against changes in atmospheric pressure. The graph does not show obvious trends, although it could be perceived that methane concentrations increase slightly with decreasing atmospheric pressure.

Figure A. Variations in GA5000 Measurements with Atmospheric Pressure (LFG02)

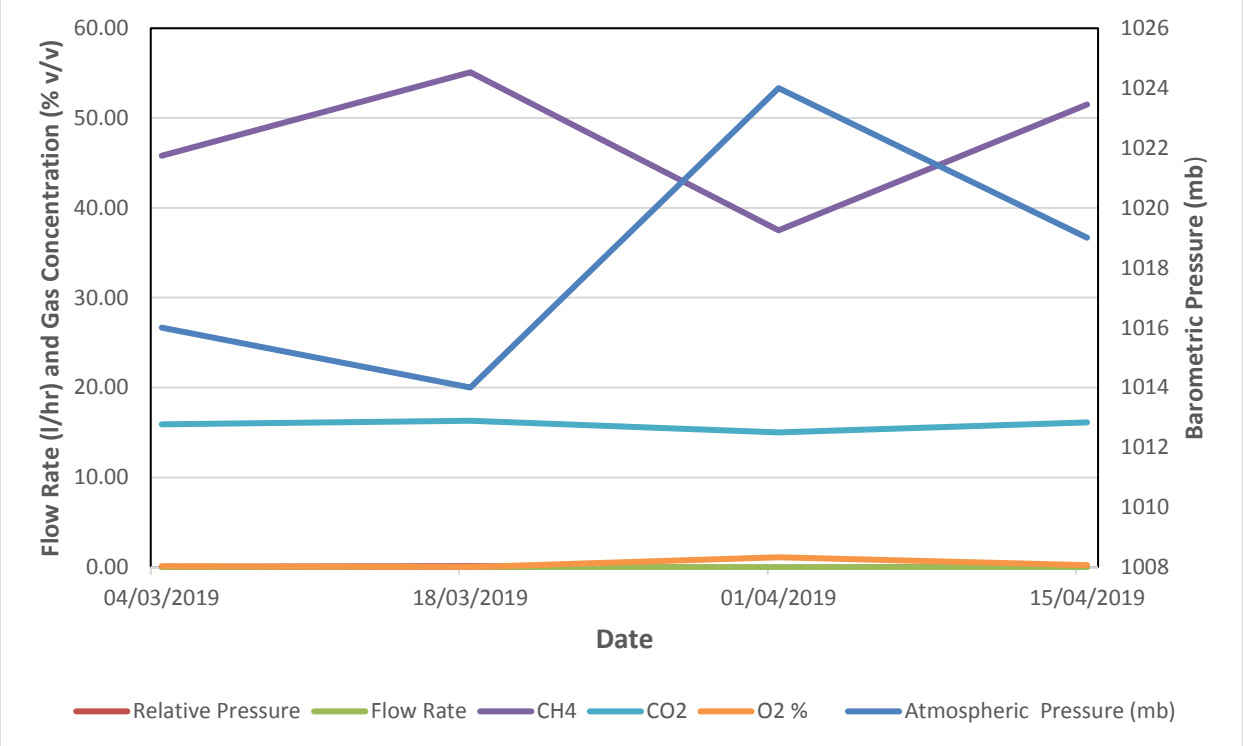
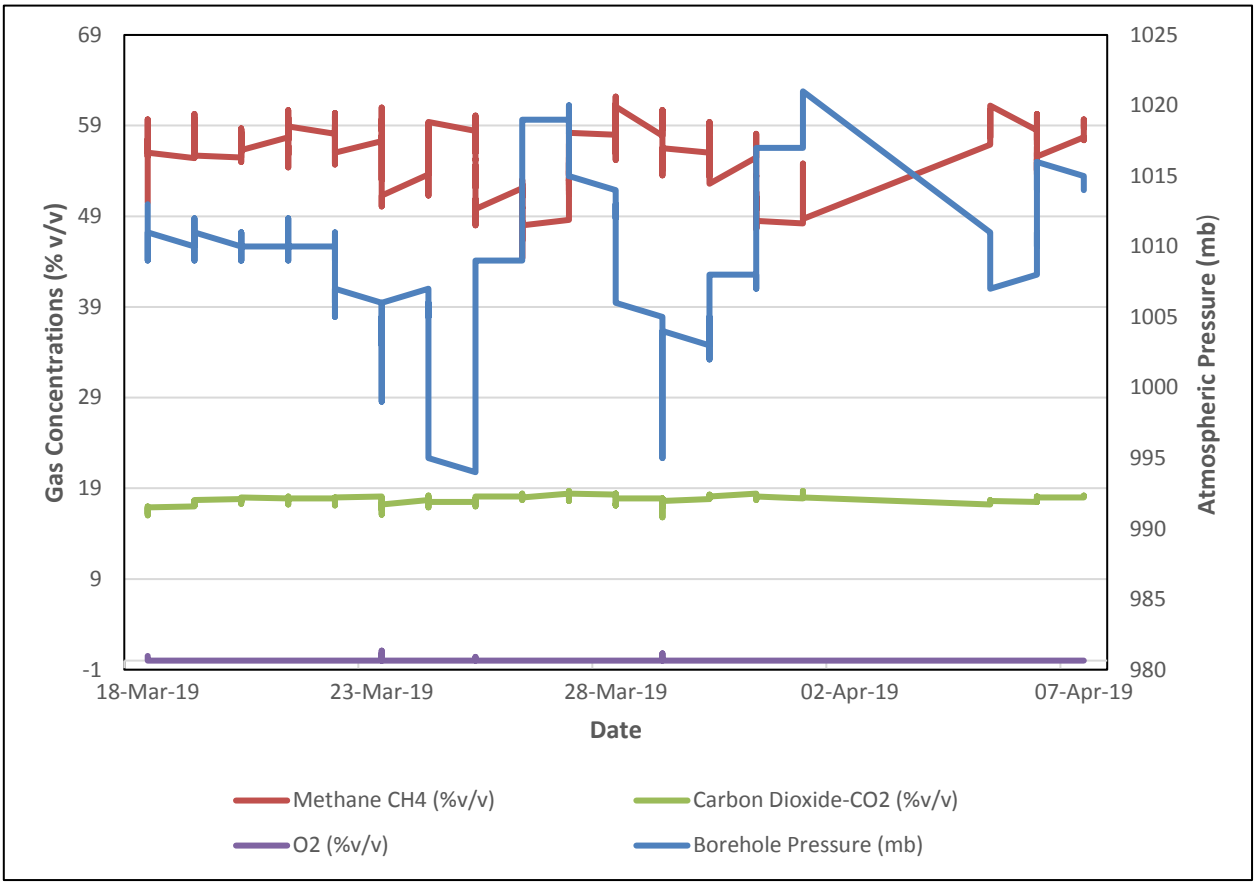


Figure B. Variations in GasClam Measurements with Atmospheric Pressure (LFG02)



7.5.1 Groundwater

During the installation of the LFG monitoring bores, groundwater was not present and the screened interval was above the groundwater table.

After each round of monitoring, inspection of the landfill monitoring bores for presence of groundwater was conducted using a water level meter. Groundwater was not present at any time.

7.6 Gas Screening Values

In terms of risk, a Hazardous Gas Flow Rate, also known as a GSV is used to characterise the site in accordance with United Kingdom industry guidance documents. The GSV is given by the equation below, where gas concentration is given in mathematical form (e.g. 50% is 0.5):

$$GSV = \text{borehole flow rate (L/hr)} \times \text{gas concentration (\%)}$$

GSVs are calculated for both methane and carbon dioxide. Trace gas concentrations are generally far lower than carbon dioxide and methane and thus are not generally considered.

Classification and design of gas protection measures based on methane and carbon dioxide flows typically are considered adequate to provide protection against acute effects from other trace gases.

Worst credible and worst possible GSVs have been calculated in accordance with CIRIA C665 guidance:

- The worst credible GSVs are zero for CH_4 and CO_2 (based on the highest recorded peak flow rate and highest recorded methane/carbon dioxide concentrations, recorded during the same monitoring round).
- The worst possible GSVs are zero for CH_4 and CO_2 (based on the highest recorded peak flow rate and highest recorded methane/carbon dioxide concentrations form the entire dataset).

The GSVs and maximum methane and carbon dioxide results are compared against Table 8.5 in CIRIA Report C665, to determine the 'Characteristic Situation' of the site based on the Wilson and Card 1999 approach.

Based on the worst possible GSVs, a 'Very Low Risk' ('Characteristic Situation 1') is suggested; however, the presence of methane exceeding 1.0 % and carbon dioxide exceeding 5 % v/v increases the risk to 'Low Risk' ('Characteristic Situation 2'). This level of risk is typical of ground gas sources from 'typical' made ground and low-level gas protection measures are considered necessary.

However, for a sensitivity check, the results have also been compared against Table 8.7 in CIRIA Report C665, to determine the 'Characteristic Situation' of the site based on the NHBC Traffic Light approach (typically applied for low rise housing with suspended floor slabs and ventilated underfloor void).

Based on the typical maximum methane concentrations exceeding 20% v/v, a 'Red' traffic light is suggested, which means that a high gas regime has been identified.

8 CONCLUSIONS AND RECOMMENDATIONS

Three rounds of methane emission surveys were completed across the surface of the site and within identifiable underground pits and in buildings immediately adjacent to the site; low concentrations of methane were recorded, but greatly below the relevant BPEM action levels.

Sub-surface landfill gas monitoring was undertaken at three dedicated landfill gas monitoring bores installed within the waste mass. The monitoring results confirm the presence of elevated (above background) methane and carbon dioxide in the sub-surface, with very depleted concentrations of oxygen and detectable trace gases (hydrogen sulphide and carbon monoxide) also noted. The concentrations of methane and carbon dioxide across the site are above the EPA BPEM action level of 1.0 % v/v CH_4 and 1.5 % v/v CO_2 above background.

Given the consistently zero (or negative) gas flow rates, the worst possible GSV is zero for CH_4 and CO_2. Using the Wilson & Card approach, the site is defined as 'Low Risk' ('Characteristic Situation 2').

For 'Characteristic Situation 2', either one or two levels of gas protection are required for commercial/industrial type buildings; in accordance with Table 8.6 of CIRIA C665, protection measures could include:

1. Reinforced concrete cast in-situ floor slab (suspended, non-suspended or raft) with minimum 1,200 g Damp Proof Membrane (DPM) (all joints and penetrations sealed).
   OR,
2. Block and beam or precast concrete slab and minimum 2,000 g DPM/or reinforced gas membrane (all joints and penetrations sealed), and
3. Possibly underfloor venting or pressurisation in combination with 1 or 2 above, depending on use.

However, the Wilson & Card Characteristic Situations are primarily driven by the GSVs, which in this case are zero due to the absence of positive gas flow. Given the development is proposed on top of the waste mass, it is considered that the maximum gas concentrations should be given more relevance. As a sensitivity check, the results have also been compared against the NHBC Traffic Light approach (typically applied for low rise housing with suspended floor slabs and ventilated underfloor void), which based on the typical maximum methane concentrations, suggests a 'Red' traffic light situation (high gas regime identified).

It is concluded that continued landfill gas generation does pose a potential risk to the proposed development and that risk mitigation measures will be required; however, in keeping with advice provided by EPA Victoria and guidance provided in EPA Publication No. 1642 *("Assessing planning proposals within the buffer of a landfill"),* the advice previously provided by Geoaquitards and given the significantly elevated concentrations of methane and carbon dioxide, it is recommended that the Responsible Authority advise the EPA on the outcomes of this assessment and confirm if an Environmental Audit under Section 53V of the Environment Protection Act 1970 is required for the proposed development

Further, in the absence of any previous assessment, we recommend that an offsite investigation also be considered to assess the potential migration of landfill gas beyond the site boundaries, in particular towards the residential properties immediately west of the site. As identified in Section 4.5, a drainage easement traversing the landfill site and extending directly to the nearby residential properties was identified, which poses a direct preferential pathway for off-site gas migration.

9 LIMITATIONS AND EXCEPTIONS OF INVESTIGATION

The report consists of the scope of work outlined previously. This report describes the work undertaken and has been compiled for the use of A.S. James Pty Ltd and the Responsible Authority only. Its conclusions are only valid for the purpose for which it was requested. This report is not an 'environmental audit' within the meaning of the Environment Protection Amendment Bill 2018 (Vic).

It is valid only when it is in original and complete form, and any person or company other than A.S. James Pty Ltd and the Responsible Authority who rely on the report without specific reference to and permission from Atma Environmental Pty Ltd does so at their own risk. While every care has been taken in the compilation of this report, to the extent that its conclusions are based on the analysis of the data made available by your organisation or by a third party, no responsibility or liability is accepted for consequences arising from either errors or omissions in that data, or from factors or data which were not made available to Atma Environmental Pty Ltd or which Atma Environmental Pty Ltd could not ascertain by reasonable inquiry in the ordinary course of its investigation, nor for any commercial decisions taken as a result of the report.

This report has not included a site history review, an assessment of potential soil, vapour, groundwater or leachate contamination, nor has it considered potential risks to off-site receptors from landfill as migration, including the existing golf club building, located on the former landfill.

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

10 REFERENCES

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LEGEND:

- Investigation Area
- 20 Wangara Rd, Sandringham
- Landfill Gas Bore Location
- Landfill Gas Walkover - Methane Survey Location

Scale: 0 5 10 20 30 40 50 m

Atma *Environmental*

Client: A.S.JAMES Geotechnical Engineers Since 1963

Project: 1741 Sandringham - LFG

Drawn by: J.H Dated: 17/04/2019 Revision: Final

Figure 1. Site Details & Sampling Locations

Table 1. Methane Fugitive Emission Survey

Atma Project Ref: Sandringham (#1741)
Monitoring Method: Gazomat Inspectra Laser CH4 Analyser
Engineer: J.H.

ID	CH4 (PPM)			Observations/Comments
	04/03/2019	18/03/2019	15/04/2019	
	Round 1	Round 2	Round 3	
ON-SITE				
ME1	1.5	0.6	2.7	Healthy vegetation
ME2	1.5	0.8	2.7	Healthy vegetation
ME3	0.9	0.9	2.8	Healthy vegetation
ME4	1.2	0.6	2.6	Very dry vegetation
ME5	6.9	0.8	2.8	Minimal vegetation, very dry
ME6	1.5	0.6	2.6	Healthy vegetation
ME7	1.6	0.6	2.6	Healthy vegetation
ME8	1.1	0.7	2.7	Healthy vegetation
ME9	1.9	0.8	2.7	No vegetation, sand
ME10	0.8	0.6	2.6	Minimal vegetation, very dry
ME11	1.7	0.7	2.8	Healthy vegetation
ME12	1.4	0.7	2.6	Dying vegetation, very dry
ME13	1.2	0.9	2.5	Minimal vegetation, very dry
ME14	1.7	5.7	2.8	No vegetation, sand
ME15	0.9	1.2	2.8	Very dry vegetation
ME16	1.5	1.6	2.6	No vegetation, sand
ME17	1.3	1.5	2.6	Very dry vegetation
ME18	1.4	1.5	2.5	Very dry vegetation
ME19	0.8	1.2	2.5	Very dry vegetation, mounded area
ME20	0.7	1.2	2.6	No vegetation, sand
OFF-SITE				
ME21	-	3.0	-	Below ground irrigation box
ME22	-	2.2	-	Inside building
ME23	-	1.9	-	Under building
ME24	-	1.3	-	Stormwater drain
ME25	-	1.3	-	NE corner of tee-off area
ME26	-	1.2	-	Stormwater drain
ME27	-	1.2	-	Mens toilets
ME28	-	1.4	-	SW corner of building

Table 2. Soil Gas Monitoring Bore Details & Discrete Results Summary (GA5000)

Project: Sandringham (1741)

Bore ID #	Bore Depth (m BGL)	Screened Interval (m BGL)	Screended Geology	Casing Stick-up (m)	Sampling Date	Sampling Round	Samplers Initials	Temp. (°C)	Time	Atmospheric Pressure (mb)	Relative Bore Pressure (mb)		Flow Rate		CH_4 %		CO2 %		O2 %		H2S (ppm)	CO (ppm)	Balance	PID (ppm)	SWL (m bTOC)
											Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Steady	Min					
LFG01	8.5	1.0 - 8.5	Landfill	0.6	04/03/2019	1	JH/MD	21	9:50	1018	0.03	0.03	0.0	0.0	44.9	44.8	14.2	14.1	0.0	0.0	1.0	4.0	41.1	24.4	DRY
					18/03/2019	2	JH/HB	19	10:00	1016	0.21	0.17	0.0	-0.1	53.9	53.8	13.3	13.3	0.0	0.0	1.0	2.0	32.9	61.2	DRY
					01/04/2019	3	JH	14	10:15	1023	-0.10	-0.09	0.0	0.0	37.1	35.2	16.2	16.1	0.3	0.3	1.0	2.0	48.4	1.9	DRY
					15/04/2019	4	JH	15	8:22	1019	0.09	0.05	0.0	0.0	51.9	51.8	13.3	13.3	0.4	0.4	1.0	1.0	34.4	2.7	DRY
LFG02	9.0	1.2 - 9.0	Landfill	0.74	04/03/2019	1	JH/MD	21	9:10	1016	0.05	0.03	0.0	0.0	45.8	45.8	16.0	15.9	0.1	0.1	1.0	2.0	38.2	44.2	DRY
					18/03/2019	2	JH/HB	19	9:40	1014	0.14	0.12	0.0	0.0	55.3	55.1	16.4	16.3	0.0	0.0	1.0	1.0	28.6	46.7	DRY
					01/04/2019	3	JH	14	10:40	1024	0.02	-0.09	0.0	0.0	38.4	37.5	15.0	15.0	1.1	1.1	0.0	2.0	46.5	4.9	DRY
					15/04/2019	4	JH	15	8:50	1019	0.15	0.14	0.0	0.0	54.3	51.5	16.1	16.1	0.2	0.2	1.0	3.0	32.3	3.8	DRY
LFG03	9.0	1.0 - 8.5	Landfill	0.65	04/03/2019	1	JH/MD	21	10:11	1018	0.05	0.02	0.0	0.0	43.1	7.9	12.3	11.3	6.5	3.1	0.0	8.0	74.2	0.0	DRY
					18/03/2019	2	JH/HB	20	10:15	1016	-0.19	-0.10	-0.2	0.0	9.1	4.0	9.1	8.5	10.4	11.1	0.0	2.0	76.4	0.8	DRY
					01/04/2019	3	JH	14	10:30	1024	0.05	-0.02	0.0	-0.1	4.9	0.0	6.1	5.6	15.7	15.1	0.0	1.0	78.6	0.1	DRY
					15/04/2019	4	JH	15	8:34	1019	-0.03	-0.03	0.0	-0.2	16.4	11.6	15.9	15.5	1.0	1.5	0.0	3.0	70.8	0.1	DRY

Notes:

The flow rate of instrument GA5000 is calibrated at 0.5-0.55 L/min.

All bores were stable purged for at least 1.0 minute before readings were taken.

Refer to Table 3 for summary of GasClam data

BGL means Below Ground Level

TOC means Top of Casing

NR means Not Recorded

Weather Conditions:

ROUND 1 Overcast, humid, slight breeze. Barometric pressure increased from 1013.9 (3/03/19 @ 3:35 pm) to 1019.8 (4/03/19 @ 10:00 am) for Moorabbin Airport

ROUND 2 Sunny, windy. Barometric pressure increased from 1015.8 (18/03/19 @ 6:00 pm) to 1018.2 (18/03/19 @ 10:00 am) for Moorabbin Airport

ROUND 3 Overcast, mild. Barometric pressure increased from 1011.4 (31/03/19 @ 5:00 am) to 1025.9 (01/04/19 @ 10:00 am) for Moorabbin Airport

ROUND 4 Partly cloudy, mild, no breeze. Barometric pressure decreased from 1025.2 (14/04/19 @ 9:00 am) to 1021.7 (15/04/19 @ 8:30 am) for Moorabbin Airport

Ground Conditions:

ALL ROUNDS Ground is very dry patchy grass with large areas of bare earth.

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
18/03/2019 10:35	1013	50.5	16.2	0.5	2	5	21.4
18/03/2019 11:35	1013	54.5	16.8	0	1	5	23.8
18/03/2019 12:35	1012	56.7	16.3	0	1	5	26.5
18/03/2019 13:35	1012	56	16.3	0	1	5	28
18/03/2019 14:35	1011	57.1	16.2	0	1	6	29.6
18/03/2019 15:35	1010	56.9	16.1	0	1	6	30.9
18/03/2019 16:35	1010	55.6	16	0	1	6	32.1
18/03/2019 17:35	1009	57.5	16.1	0	1	6	32
18/03/2019 18:35	1009	57.5	16.3	0	1	6	31
18/03/2019 19:35	1010	57.2	16.3	0	1	6	27.9
18/03/2019 20:35	1010	58.1	16.7	0	1	5	23.8
18/03/2019 21:35	1011	59.7	17	0	1	5	20.8
18/03/2019 22:35	1011	56.6	17	0	1	4	19
18/03/2019 23:35	1011	56	16.9	0	1	4	17.9
19/03/2019 0:35	1010	55.4	17	0	1	4	17.3
19/03/2019 1:35	1010	56.8	17.1	0	1	4	16.9
19/03/2019 2:35	1010	57.3	17.4	0	1	4	16.6
19/03/2019 3:35	1010	59.8	17.4	0	1	4	16.8
19/03/2019 4:35	1010	59.6	17.4	0	1	4	17.1
19/03/2019 5:35	1010	57.6	17.6	0	1	4	17.2
19/03/2019 6:35	1010	59.9	17.4	0	1	4	17.2
19/03/2019 7:35	1010	60.3	17.5	0	1	4	17.3
19/03/2019 8:35	1011	58	17.6	0	1	4	17.5
19/03/2019 9:35	1011	56.5	17.5	0	1	4	18.6
19/03/2019 10:35	1012	56.6	17.6	0	1	5	20.6
19/03/2019 11:35	1012	55.5	17.5	0	1	5	22.6
19/03/2019 12:35	1011	56.9	17.6	0	1	6	23.8
19/03/2019 13:35	1011	55.5	17.3	0	2	6	26.9
19/03/2019 14:35	1010	56.3	17.2	0	1	6	27.9
19/03/2019 15:35	1009	56.3	17.1	0	1	6	28.7
19/03/2019 16:35	1009	57.2	17.2	0	1	7	29.2
19/03/2019 17:35	1009	56.7	17.2	0	1	7	29.1
19/03/2019 18:35	1010	58.5	17.1	0	1	7	27.9
19/03/2019 19:35	1010	58.8	17.6	0	1	6	24.8
19/03/2019 20:35	1011	57.4	17.6	0	1	5	21.4
19/03/2019 21:35	1011	57.7	17.5	0	1	5	19.7
19/03/2019 22:35	1011	58.1	17.5	0	1	4	18.8
19/03/2019 23:35	1011	55.7	17.7	0	1	5	18.4
20/03/2019 0:35	1010	55.5	17.8	0	1	4	18.3
20/03/2019 1:35	1010	57.3	17.5	0	1	4	18.1
20/03/2019 2:35	1009	56.6	17.7	0	1	5	18.1
20/03/2019 3:35	1009	56.8	17.6	0	1	5	18.1
20/03/2019 4:35	1009	57.5	17.5	0	1	6	18.1
20/03/2019 5:35	1009	57	17.6	0	1	7	18.2
20/03/2019 6:35	1009	58.6	17.6	0	1	6	18.2
20/03/2019 7:35	1009	57.7	17.8	0	1	5	18.2
20/03/2019 8:35	1010	58.3	17.8	0	1	5	18.2
20/03/2019 9:35	1011	57.5	17.7	0	1	5	18.3
20/03/2019 10:35	1011	58	17.8	0	1	5	19
20/03/2019 11:35	1011	57.3	17.8	0	1	5	20.3
20/03/2019 12:35	1011	55	17.8	0	1	6	21.7
20/03/2019 13:35	1011	55.4	17.9	0	1	6	22.6
20/03/2019 14:35	1010	56.4	17.8	0	1	6	24.4
20/03/2019 15:35	1009	56.3	17.7	0	1	7	26.1
20/03/2019 16:35	1009	56	17.3	0	1	7	28.4
20/03/2019 17:35	1009	56.2	17.3	0	1	8	28.5
20/03/2019 18:35	1010	56.7	17.5	0	1	7	25.9

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
20/03/2019 19:35	1010	56.3	17.7	0	1	6	23.6
20/03/2019 20:35	1010	58.7	17.7	0	1	6	21.1
20/03/2019 21:35	1011	58	17.8	0	1	5	19.8
20/03/2019 22:35	1011	56.7	17.8	0	1	5	18.9
20/03/2019 23:35	1010	56.3	18	0	1	5	18
21/03/2019 0:35	1010	57.7	17.9	0	1	5	17.1
21/03/2019 1:35	1010	57.7	17.9	0	1	5	16.5
21/03/2019 2:35	1010	58.1	17.7	0	1	5	16.1
21/03/2019 3:35	1009	57.7	17.8	0	1	4	15.6
21/03/2019 4:35	1009	57.6	17.6	0	1	4	16.1
21/03/2019 5:35	1009	59.9	17.6	0	1	5	16.5
21/03/2019 6:35	1010	59.2	17.8	0	1	5	16.8
21/03/2019 7:35	1010	56.8	17.9	0	1	5	17.1
21/03/2019 8:35	1011	56.4	17.8	0	1	5	17.5
21/03/2019 9:35	1011	55.8	17.9	0	1	5	18.2
21/03/2019 10:35	1012	56.8	18	0	1	5	19.3
21/03/2019 11:35	1012	54.4	18	0	1	6	20.2
21/03/2019 12:35	1012	54.6	18.1	0	1	6	21.8
21/03/2019 13:35	1011	55.5	18.1	0	2	7	24.2
21/03/2019 14:35	1011	56	17.7	0	2	8	27.2
21/03/2019 15:35	1010	58.2	17.2	0	2	9	30
21/03/2019 16:35	1010	57.4	17.2	0	1	10	31.1
21/03/2019 17:35	1010	57.4	17.2	0	1	9	28.6
21/03/2019 18:35	1010	57.8	17.3	0	1	8	27.9
21/03/2019 19:35	1010	57.6	17.4	0	1	8	25.9
21/03/2019 20:35	1010	60.7	17.8	0	1	7	22.5
21/03/2019 21:35	1010	60.2	17.9	0	1	6	20.3
21/03/2019 22:35	1010	58.2	17.9	0	1	6	19
21/03/2019 23:35	1010	58.9	17.9	0	1	5	18.3
22/03/2019 0:35	1010	58.1	17.9	0	1	5	17.6
22/03/2019 1:35	1010	60.4	17.7	0	1	5	17
22/03/2019 2:35	1009	59.6	17.7	0	1	5	16.5
22/03/2019 3:35	1009	60	17.7	0	1	5	16.7
22/03/2019 4:35	1009	58.8	17.7	0	1	5	17.1
22/03/2019 5:35	1009	58.1	17.8	0	1	6	17.4
22/03/2019 6:35	1009	59	17.7	0	1	5	17.6
22/03/2019 7:35	1010	57.6	17.9	0	1	5	17.8
22/03/2019 8:35	1010	58.7	17.9	0	1	6	17.8
22/03/2019 9:35	1010	56.9	17.7	0	1	6	18.3
22/03/2019 10:35	1011	56	18	0	1	6	19.3
22/03/2019 11:35	1010	56.2	18	0	2	7	22.3
22/03/2019 12:35	1010	56.7	17.5	0	2	9	26.9
22/03/2019 13:35	1009	59.1	17.3	0	2	10	29.9
22/03/2019 14:35	1008	58.7	17.1	0	2	11	31.2
22/03/2019 15:35	1007	58	17.2	0	2	12	32.6
22/03/2019 16:35	1006	58.3	17.2	0	2	13	33.2
22/03/2019 17:35	1005	58	17.2	0	2	13	33.3
22/03/2019 18:35	1006	57.5	17.2	0	2	13	32.1
22/03/2019 19:35	1007	54.7	17.2	0	1	10	29.1
22/03/2019 20:35	1006	58.2	17.6	0	1	9	25
22/03/2019 21:35	1007	56.7	17.9	0	1	8	22.2
22/03/2019 22:35	1007	54.8	17.9	0	1	7	20.6
22/03/2019 23:35	1007	56	18	0	2	7	19.6
23/03/2019 0:35	1006	57.3	18.1	0	1	6	18.9
23/03/2019 1:35	1005	58	18	0	1	6	17.8
23/03/2019 2:35	1005	58.2	17.9	0	1	6	17.3
23/03/2019 3:35	1004	61	17.9	0	1	6	17.1

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
23/03/2019 4:35	1004	60.2	17.8	0	1	6	17.3
23/03/2019 5:35	1003	58.4	17.8	0	1	6	16.9
23/03/2019 6:35	1003	59.7	17.8	0	1	5	16.5
23/03/2019 7:35	1004	59.7	17.9	0	1	6	16.8
23/03/2019 8:35	1005	55.5	16.6	0.8	1	5	17.2
23/03/2019 9:35	1004	53	16.8	0.5	1	7	17.7
23/03/2019 10:35	1005	54.9	17.2	0.1	1	7	18.1
23/03/2019 11:35	1004	56.3	17.8	0	2	7	18.4
23/03/2019 12:35	1002	57	17.9	0	1	7	21.3
23/03/2019 13:35	1001	56.9	17.4	0	1	9	26.4
23/03/2019 14:35	1000	57.1	17.2	0	2	11	30.4
23/03/2019 15:35	1000	57.9	17	0	2	13	32.9
23/03/2019 16:35	999	57.4	16.8	0	2	14	34.1
23/03/2019 17:35	1000	57.7	16.9	0	2	16	34.5
23/03/2019 18:35	1002	54.7	16.1	1.1	1	11	28.3
23/03/2019 19:35	1003	53.6	16.9	0.7	2	10	23.3
23/03/2019 20:35	1004	51.9	17.4	0.2	2	8	20.6
23/03/2019 21:35	1005	51.1	17.1	0.6	2	7	19.3
23/03/2019 22:35	1006	50.1	17.1	0.3	2	7	18.4
23/03/2019 23:35	1006	51.3	17.2	0	1	6	17.6
24/03/2019 0:35	1007	53.6	17.7	0	1	6	17.1
24/03/2019 1:35	1007	55.5	17.7	0	1	6	16.8
24/03/2019 2:35	1006	51.3	17.9	0	1	6	17
24/03/2019 3:35	1005	51.7	18	0	1	6	16.9
24/03/2019 4:35	1005	55.1	18	0	1	5	16.5
24/03/2019 5:35	1005	54.1	18	0	1	5	16.2
24/03/2019 6:35	1005	57.2	17.9	0	1	5	15.9
24/03/2019 7:35	1006	54.2	17.9	0	1	5	14.8
24/03/2019 8:35	1006	55.1	18	0	1	5	14.4
24/03/2019 9:35	1006	55.2	18.1	0	1	6	18.3
24/03/2019 10:35	1005	55.8	18.2	0	2	7	22.2
24/03/2019 11:35	1004	56.3	17.4	0	1	8	25.8
24/03/2019 12:35	1003	55.3	17.4	0	2	10	29.1
24/03/2019 13:35	1002	54.8	17.2	0	2	12	31.7
24/03/2019 14:35	1000	57.8	17	0	2	13	32.5
24/03/2019 15:35	999	56.2	16.9	0	2	14	33.2
24/03/2019 16:35	999	56.9	16.9	0	2	14	32.8
24/03/2019 17:35	998	56.9	16.9	0	2	12	30.2
24/03/2019 18:35	997	57.5	16.9	0	2	11	28.5
24/03/2019 19:35	996	59.3	17.2	0	1	10	26.6
24/03/2019 20:35	996	57.4	17.4	0	1	9	25
24/03/2019 21:35	995	59.2	17.3	0	1	8	24
24/03/2019 22:35	995	57.4	17.5	0	1	8	23.4
24/03/2019 23:35	995	59.4	17.5	0	1	8	22.7
25/03/2019 0:35	994	58.4	17.5	0	1	7	21
25/03/2019 1:35	995	60.1	17.5	0	1	7	19.6
25/03/2019 2:35	995	56	17.5	0	1	7	18.7
25/03/2019 3:35	995	59.2	17.6	0	1	7	18
25/03/2019 4:35	995	57.3	17.5	0	1	6	16.6
25/03/2019 5:35	996	55.2	17.7	0	1	6	15.9
25/03/2019 6:35	997	55.3	17.6	0	1	6	15.6
25/03/2019 7:35	998	54.1	17.4	0	1	6	15.1
25/03/2019 8:35	999	52.8	17	0.4	1	6	14.6
25/03/2019 9:35	1000	54	17.7	0	1	7	14.1
25/03/2019 10:35	1001	52.8	17.7	0	1	6	14.3
25/03/2019 11:35	1001	52.2	17.7	0	1	6	15.9
25/03/2019 12:35	1002	53.8	17.7	0	1	6	17.5

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
25/03/2019 13:35	1003	54.6	17.9	0	1	7	17.8
25/03/2019 14:35	1004	54.3	17.7	0	1	6	18.6
25/03/2019 15:35	1004	51.4	17.8	0	1	7	17.8
25/03/2019 16:35	1004	50.3	17.6	0	2	7	19.2
25/03/2019 17:35	1004	49.1	17.8	0	2	7	20.9
25/03/2019 18:35	1005	50.9	17.9	0	1	7	19.5
25/03/2019 19:35	1006	50.6	17.8	0	1	6	17
25/03/2019 20:35	1007	50.3	17.6	0	1	6	15.1
25/03/2019 21:35	1008	48	17.6	0	1	6	13.4
25/03/2019 22:35	1008	49.7	17.9	0	1	6	12.4
25/03/2019 23:35	1009	49.8	18.1	0	1	5	11.5
26/03/2019 0:35	1009	52.1	18.1	0	1	5	10.9
26/03/2019 1:35	1009	51.1	18.3	0	1	5	10.8
26/03/2019 2:35	1009	51.7	18.1	0	1	5	10.7
26/03/2019 3:35	1009	51.2	18.3	0	1	5	10.6
26/03/2019 4:35	1009	51.1	18.4	0	1	4	10.4
26/03/2019 5:35	1010	53	18.2	0	1	5	10.5
26/03/2019 6:35	1011	49.9	18.1	0	1	5	10.3
26/03/2019 7:35	1011	52.6	18.1	0	1	5	9.9
26/03/2019 8:35	1012	51.4	18.3	0	1	4	9.9
26/03/2019 9:35	1013	48.5	17.9	0	1	4	10.9
26/03/2019 10:35	1014	47.2	17.9	0	1	6	12.9
26/03/2019 11:35	1015	44.4	17.9	0	2	6	16.6
26/03/2019 12:35	1015	48.1	18.1	0	2	7	19.2
26/03/2019 13:35	1015	46.3	17.9	0	2	8	21.4
26/03/2019 14:35	1015	46.4	17.9	0	2	8	22.8
26/03/2019 15:35	1015	48.5	18.2	0	2	9	24.3
26/03/2019 16:35	1015	48.3	18.1	0	2	10	25.1
26/03/2019 17:35	1016	49.7	18.1	0	2	11	25.1
26/03/2019 18:35	1016	50	18.2	0	2	10	23.5
26/03/2019 19:35	1017	49.8	18.3	0	1	8	19.9
26/03/2019 20:35	1017	49	18	0	1	6	16.5
26/03/2019 21:35	1018	48.1	17.9	0	1	6	14.8
26/03/2019 22:35	1018	47.9	17.7	0	1	5	13.9
26/03/2019 23:35	1019	48	18	0	1	6	13.3
27/03/2019 0:35	1019	48.6	18.4	0	1	5	12.7
27/03/2019 1:35	1018	49.2	18.4	0	1	5	11.6
27/03/2019 2:35	1018	53.1	18.6	0	1	5	11.6
27/03/2019 3:35	1018	51.4	18.4	0	1	5	11.9
27/03/2019 4:35	1018	54.3	18.7	0	1	5	11.9
27/03/2019 5:35	1018	54.9	18.6	0	1	5	11.9
27/03/2019 6:35	1019	53.6	18.6	0	1	5	11.9
27/03/2019 7:35	1019	52.9	18.5	0	1	5	11.8
27/03/2019 8:35	1019	53.3	18.5	0	1	5	11.8
27/03/2019 9:35	1020	51.8	18.6	0	1	5	12.4
27/03/2019 10:35	1020	53	18.5	0	2	5	14.8
27/03/2019 11:35	1019	52.5	18.4	0	2	7	19.1
27/03/2019 12:35	1019	55.5	18.4	0	2	8	20.9
27/03/2019 13:35	1018	52.9	18.4	0	2	9	23.4
27/03/2019 14:35	1017	53.2	18.2	0	2	10	24.5
27/03/2019 15:35	1017	54	17.7	0	2	10	25.5
27/03/2019 16:35	1016	53.5	17.7	0	2	11	26.8
27/03/2019 17:35	1016	54.1	17.6	0	2	11	27.3
27/03/2019 18:35	1015	57	17.7	0	2	11	26.4
27/03/2019 19:35	1015	53.6	18	0	2	10	22.6
27/03/2019 20:35	1016	55.9	18	0	2	8	18.4
27/03/2019 21:35	1015	56.3	18.2	0	2	7	15.8

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
27/03/2019 22:35	1015	57.4	18.3	0	2	6	14.2
27/03/2019 23:35	1015	58.2	18.4	0	1	6	12.9
28/03/2019 0:35	1014	58	18.3	0	1	5	11.8
28/03/2019 1:35	1014	56.8	18.4	0	1	5	11.1
28/03/2019 2:35	1013	57.8	18.2	0	1	5	10.6
28/03/2019 3:35	1013	59	18.3	0	1	5	10.3
28/03/2019 4:35	1013	58.6	18.3	0	1	5	9.9
28/03/2019 6:28	1012	59	18.3	0	2	6	9.8
28/03/2019 7:28	1012	61.4	18.4	0	2	5	9.6
28/03/2019 8:28	1013	60.1	18.3	0	1	5	9.5
28/03/2019 9:28	1013	62.2	18.2	0	1	6	13
28/03/2019 10:28	1013	59.2	18.4	0	2	7	17.1
28/03/2019 11:28	1012	57.3	18.2	0	2	8	21.7
28/03/2019 12:28	1011	55.9	17.5	0	3	10	25.9
28/03/2019 13:28	1010	60.1	17.2	0	3	13	29.4
28/03/2019 14:28	1009	57.8	17.3	0	3	14	30.8
28/03/2019 15:28	1008	58.4	17.1	0	3	15	31.9
28/03/2019 16:28	1008	57.4	17.2	0	3	16	32.4
28/03/2019 17:28	1007	58.3	17.2	0	3	16	32.8
28/03/2019 18:28	1006	55.2	17.1	0	3	16	32.2
28/03/2019 19:28	1006	57.5	17.3	0	2	14	28.5
28/03/2019 20:28	1006	59	17.6	0	2	11	23.8
28/03/2019 21:28	1006	61.2	17.8	0	2	10	21
28/03/2019 22:28	1006	58.8	17.9	0	2	8	18.9
28/03/2019 23:28	1006	61.1	17.9	0	2	7	17.4
29/03/2019 0:28	1005	57.9	17.9	0	1	6	15.8
29/03/2019 1:28	1004	58.7	17.9	0	1	6	15
29/03/2019 2:28	1004	59.8	17.9	0	1	6	15
29/03/2019 3:28	1003	60.7	17.8	0	1	6	15.3
29/03/2019 4:28	1002	59.5	17.7	0	1	6	15.3
29/03/2019 5:28	1002	60.7	17.8	0	1	6	15.5
29/03/2019 6:28	1001	60.2	17.8	0	1	6	15.6
29/03/2019 7:28	1001	59.4	17.7	0	1	6	15.5
29/03/2019 8:28	1001	59.7	17.9	0	2	6	15.4
29/03/2019 9:28	1001	60.1	17.7	0	2	7	17.3
29/03/2019 10:28	1001	58.6	17.8	0	2	8	19.6
29/03/2019 11:28	1000	59.7	17.9	0	2	8	21.1
29/03/2019 12:28	999	59.5	17.8	0	2	9	22.4
29/03/2019 13:28	998	59.7	17.6	0	2	10	23.9
29/03/2019 14:28	996	60.1	17.3	0	2	11	25.1
29/03/2019 15:28	995	60.3	17.3	0	2	10	25
29/03/2019 16:28	995	60.4	17.5	0	2	10	24.9
29/03/2019 17:28	997	54.9	15.8	0.6	2	8	25.6
29/03/2019 18:28	999	53.5	16.5	0.8	3	10	21.7
29/03/2019 19:28	1000	56.4	17	0.2	2	10	18.3
29/03/2019 20:28	1002	56.5	16.9	0.2	2	7	16.1
29/03/2019 21:28	1003	54.1	17.2	0.1	2	7	14.2
29/03/2019 22:28	1003	55.9	17.5	0	2	6	12.9
29/03/2019 23:28	1004	56.5	17.6	0	1	6	12.3
30/03/2019 0:28	1003	56	17.8	0	1	5	11.3
30/03/2019 1:28	1004	55	18	0	1	4	10.3
30/03/2019 2:28	1003	54.5	18	0	1	5	9.9
30/03/2019 3:28	1003	55.7	18	0	1	4	9.8
30/03/2019 4:28	1002	59.1	18	0	1	5	9.6
30/03/2019 5:28	1003	59.4	18.2	0	1	4	9.2
30/03/2019 6:28	1003	58.3	18.1	0	1	4	9.1
30/03/2019 7:28	1003	59.3	18.1	0	1	5	8.8

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
30/03/2019 8:28	1004	59	18.1	0	1	5	8.6
30/03/2019 9:28	1004	57	18	0	1	5	8.7
30/03/2019 10:28	1005	56.1	18.1	0	1	5	9.1
30/03/2019 11:28	1005	57.6	18	0	1	5	9.8
30/03/2019 12:28	1005	55.4	18	0	1	4	9.6
30/03/2019 13:28	1005	54.5	18.1	0	1	5	9.9
30/03/2019 14:28	1005	57.6	18.2	0	2	5	10.5
30/03/2019 15:28	1004	57.2	18	0	2	5	12.4
30/03/2019 16:28	1005	57.5	18.2	0	2	6	13.3
30/03/2019 17:28	1005	55.7	18.3	0	1	6	12.3
30/03/2019 18:28	1006	54.5	18.1	0	1	6	12.6
30/03/2019 19:28	1006	53.4	18.2	0	1	5	11.8
30/03/2019 20:28	1007	54.1	18.2	0	1	5	10.6
30/03/2019 21:28	1008	54.8	17.9	0	1	5	9.8
30/03/2019 22:28	1008	52.8	18.1	0	1	5	9.1
30/03/2019 23:28	1008	52.6	18.1	0	1	4	8.8
31/03/2019 0:28	1008	55.5	18.4	0	2	5	8.6
31/03/2019 1:28	1007	56.4	18.4	0	2	4	8.8
31/03/2019 2:28	1007	57.2	18.3	0	2	4	9.1
31/03/2019 3:28	1007	58.1	18.2	0	2	5	9.4
31/03/2019 4:28	1007	57.6	18.3	0	2	5	9.9
31/03/2019 5:28	1007	57	18.1	0	2	6	10.2
31/03/2019 6:28	1008	56.3	18.3	0	1	5	10.4
31/03/2019 7:28	1008	53.4	18.1	0	1	5	10.8
31/03/2019 8:28	1009	53.5	18.1	0	1	5	11.1
31/03/2019 9:28	1010	53.1	17.9	0	1	5	11.7
31/03/2019 10:28	1011	50.7	17.9	0	2	6	12.9
31/03/2019 11:28	1012	50.3	17.9	0	2	6	14.3
31/03/2019 12:28	1012	49.4	17.8	0	2	6	15.6
31/03/2019 13:28	1012	51.7	17.8	0	2	7	17.5
31/03/2019 14:28	1012	49.7	18	0	2	7	16.3
31/03/2019 15:28	1013	50.3	17.9	0	2	6	15.7
31/03/2019 16:28	1013	50.7	17.9	0	2	6	15.6
31/03/2019 17:28	1013	50.3	18	0	2	7	16.4
31/03/2019 18:28	1014	51.2	17.7	0	2	7	16.1
31/03/2019 19:28	1015	47.6	17.8	0	2	6	15
31/03/2019 20:28	1016	49.3	17.8	0	2	6	14
31/03/2019 21:28	1017	48.5	17.8	0	2	6	13.4
31/03/2019 22:28	1017	47.7	17.8	0	2	6	13.1
31/03/2019 23:28	1017	48.5	18.1	0	1	5	12.9
01/04/2019 0:28	1017	48.2	17.9	0	1	5	12.6
01/04/2019 1:28	1018	49.3	18.2	0	2	5	12.1
01/04/2019 2:28	1018	50.3	18.3	0	2	5	11.9
01/04/2019 3:28	1018	52.2	18.5	0	2	6	11.9
01/04/2019 4:28	1018	52.6	18.5	0	2	6	11.8
01/04/2019 5:28	1018	54.8	18.7	0	2	6	11.6
01/04/2019 6:28	1019	52.1	18.3	0	1	5	11.3
01/04/2019 7:28	1019	50.9	18.2	0	1	5	10.8
01/04/2019 8:28	1020	50.3	18.2	0	1	5	10.6
01/04/2019 9:28	1021	48.7	18	0	1	5	11.2
05/04/2019 18:30	1011	56.9	17.2	0	2	13	27.7
05/04/2019 19:30	1010	57.3	17.4	0	2	8	25.9
05/04/2019 20:30	1009	60.7	17.6	0	1	7	24.5
05/04/2019 21:30	1008	57.7	17.7	0	1	6	23.8
05/04/2019 22:30	1008	60.5	17.4	0	1	6	23.3
05/04/2019 23:30	1007	61.2	17.6	0	1	7	23.1
06/04/2019 0:30	1008	58.5	17.5	0	1	6	23.3

Table 3. GasClam Results Summary (LFG02)

Project: Sandringham (#1741)

Sample Date & Time	Borehole Pressure (mb)	Methane CH_4 (%v/v)	Carbon Dioxide- CO_2 (%v/v)	O2 (%v/v)	H2S (ppm)	CO (ppm)	Temperature (celcius)
06/04/2019 1:30	1008	60.3	17.6	0	1	7	23.3
06/04/2019 2:30	1010	58.8	17.6	0	1	6	21.4
06/04/2019 3:30	1011	57.4	17.5	0	1	6	18.8
06/04/2019 4:30	1010	58.6	17.6	0	1	5	17.1
06/04/2019 5:30	1011	58.5	17.7	0	1	5	15.9
06/04/2019 6:30	1012	57.6	17.8	0	1	5	15.5
06/04/2019 7:30	1013	57.4	17.7	0	1	5	15.2
06/04/2019 8:30	1014	56.9	17.6	0	1	5	15
06/04/2019 9:30	1014	58.6	17.9	0	1	5	15.5
06/04/2019 10:30	1015	54	17.9	0	1	5	17.5
06/04/2019 11:30	1016	55	17.7	0	1	6	20.5
06/04/2019 12:30	1016	54.5	17.7	0	1	6	23
06/04/2019 13:30	1015	54	17.7	0	1	6	23.6
06/04/2019 14:30	1015	53.6	17.8	0	1	8	24.8
06/04/2019 15:30	1014	54	17.9	0	1	8	25
06/04/2019 16:30	1014	55.3	17.6	0	2	7	25.6
06/04/2019 17:30	1014	54.1	17.7	0	1	8	25.1
06/04/2019 18:30	1015	56	17.9	0	1	7	23.6
06/04/2019 19:30	1015	55.5	18.1	0	1	6	19.8
06/04/2019 20:30	1015	55.4	18	0	1	5	16.1
06/04/2019 21:30	1016	55.1	18.1	0	1	5	14
06/04/2019 22:30	1016	56.7	18	0	1	4	12.7
06/04/2019 23:30	1016	55.6	18	0	1	4	11.8
07/04/2019 0:30	1015	57.7	18	0	1	4	10.9
07/04/2019 1:30	1015	57.4	18.2	0	1	4	10.2
07/04/2019 2:30	1014	59.7	18.2	0	1	4	9.4
07/04/2019 3:30	1014	58.7	18.1	0	1	4	8.7
MAXIMUM:	1021	62	19	1.1	3	16	35
MINIMUM:	994	44	16	0.0	1	4	9
RANGE:	27	18	3	1.1	2	12	26
MEAN:	1009	56	18	0.0	1	7	19
STD. DEV.	-	3	0	0.1	1	2	6.4

APPENDIX A

Site Setting

WANGARA ROAD

STREET

GEORGE

CHELTENHAM MEMORIAL PARK

TALINGA ROAD

BALMORAL AVENUE

POBBLEBONK PARK

27
29
31
33
35
37
45
49
51
53
55
2

crossover for bus access

Bus and car entry and exit

Existing lower car park access

EXISTING CAR PARK (58 CARS)

EXISTING ADMIN BUILDING

EXISTING MINI GOLF AREA TO REMAIN

Pedestrian access

Bus

PROPOSED STADIUM
3 INDOOR NETBALL COURTS

FORECOURT

PROPOSED CAR PAKING

7800

6400

Pedestrian access

Bin enclosure

Ambulance parking

FORECOURT

Bus

STAGE ONE
12 OUTDOOR NETBALL COURTS WITH LIGHTING
(NOTE: ADDITIONAL LINE TOLERANCE)

PERIMETER ACCESS

STAGE TWO
3 OUTDOOR NETBALL COURTS WITH LIGHTING

Existing wall to cemetery to be protected from earthworks

HABITAT AREA OF THE BRONZEWING PIGEON

Bus and car entry and exit

Existing gravel track upgraded to an asphalt / sealed 7.8 metre wide road

SUMMARY

- 12 STAGE ONE OUTDOOR NETBALL COURTS
- 3 STAGE TWO OUTDOOR NETBALL COURTS
- 58 EXISTING CAR PARK SPACES
- 290 NEW CAR PARK SPACES
- 2 DISABLED CAR PARK SPACES
- AMBULANCE BAY
- BICYCLE PARKING
- BUS DROP-OFF POINT
- WASTE COLLECTION POINT

LEGEND

- EXISTING TREES TO REMAIN
- EXISTING CONTOUR AT ONE (1) METRE INTERVALS
- PROPOSED REVEGETATION AREA, TREES SHRUBS AND GROUND COVERS
  NOTE: SOUTHERN BANK LIGUSTRUM WOODY WEEDS TO BE REMOVED AND REPLACED WITH INDIGENOUS VEGETATION
- PROPOSED TREES WITH FORMALIZED CAR PAK
- PROPOSED STORMWATER RETENTION AREA
- EXISTING / PROPOSED GRASSED AREAS AS NOTED
- EXISTING / PROPOSED CAR AS NOTED PARK SPACE 2.6mX5.4m
  EXISTING PARKING 58 CARS
  PROPOSED CAR PARKING 298 CARS
- PROPOSED PEDESTRIAN ACCESS 2-3m WIDE
- RW — INDICATIVE RETAINING WALL LOCATION
- TEMPORARY ACCESS PATH AT STAGE 2 COURTS
- PROPOSED OUTDOOR NETBALL COURT WITH LIGHTING AND COACHES BOX
  NOTE: EACH COURT HAS 100mm ADDITIONAL TOLERANCE SPACE I.E. 3.05m IS NOW 3.15m, 3.65m IS NOW 3.75m
- PROPOSED PLANTING BED WITH SEAT TO THE FORECOURT OF THE STADIUM
- PROPOSED PLANTING BED TO THE FORECOURT OF THE STADIUM
- PROPOSED CAFE STYLE TABLES AND CHAIRS TO THE FORECOURT OF THE STADIUM
- PROPOSED STADIUM WITH 3 INDOOR COURTS AND CHANGE ROOMS
- FOOTPRINT OF CURRENT MASTERPLAN
- SUB-LEASED AREA TO MINI GOLF
- EXISTING HABITAT AREA OF THE BRONZEWING PIGEON
- SPECTATOR VIEWING GRASSED MOUNDING

CONCEPT MASTERPLAN - OPTION 2
SANDRINGHAM NETBALL CENTRE
BAYSIDE CITY COUNCIL

0 5 10 15 20 25 50M

SCALE 1:500 (B1 SHEET)

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Amendments:

Print Issue:
09.11.2018 - Draft Emailed to I Kabir
14.11.2018 - Emailed to I Kabir

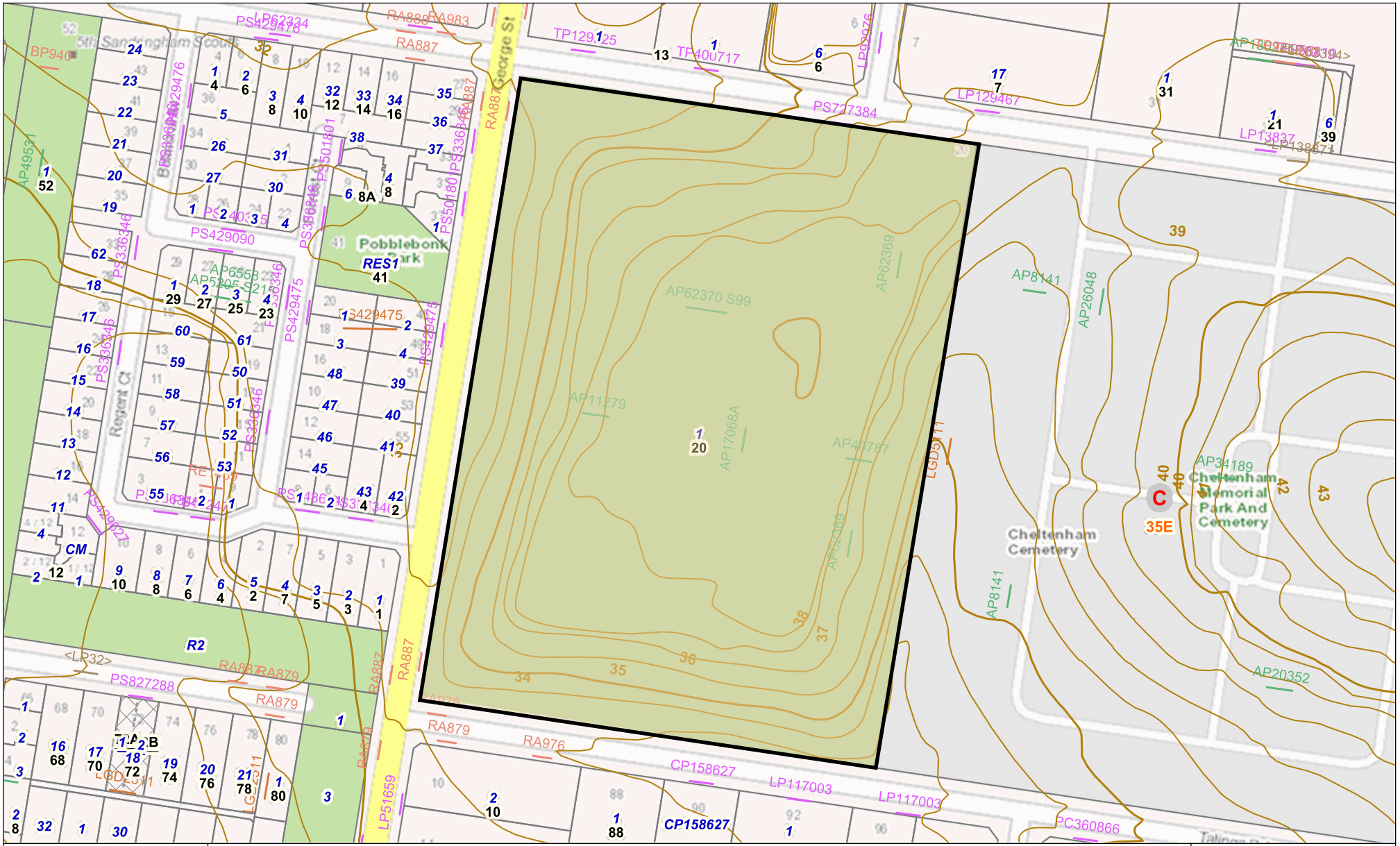
Title: CONCEPT MASTER PLAN - OPTION 2

Client: BAYSIDE CITY COUNCIL

MICHAEL SMITH AND ASSOCIATES
Landscape Architecture and Urban Design

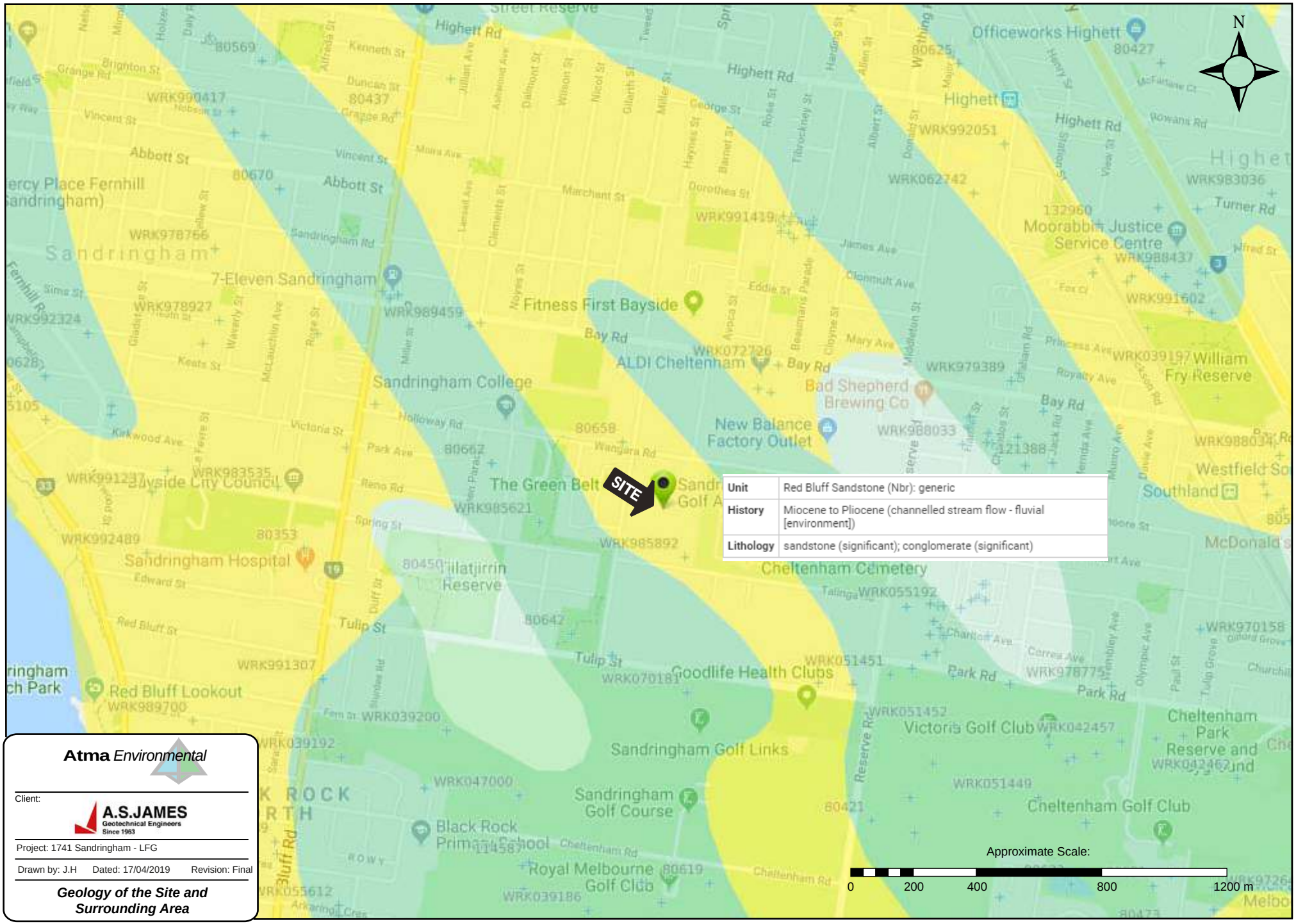
Office: 1st floor, 407 Whitehorse Road, Balwyn VIC 3103
Postal: 5 Jervis Street, Camberwell VIC 3124
Tel: 9830 0414
Fax: 9830 2555
Email: mike@msalandurb.com.au

Drawn: SY
Date: 17 /10/2018
Project No.: 18-055
Cad File:
Drawing No.: Sheet 1 of 1



Co-ordinates of Plot Corners	Data Source: Vicmap Property	Co-ordinates of Plot Corners
NW 326622,5797066	0 20 40 60 80 100 120 140 160 180 200m	NE 327284,5797080
SW 326631,5796667	Scale of Metres (1:2,500)	SE 327293,5796681
MGA Zone 55	MGA Zone 55	MGA Zone 55
	Melways- 77 C12 (ed.42) Vicroads- 447 E5 (ed.8)	
	Created 4:5 PM on Apr 16, 2019	

WARNING: No warranty is given as to the accuracy or completeness of this map. Dimensions are approximate. For property dimensions, undertake a Title search.



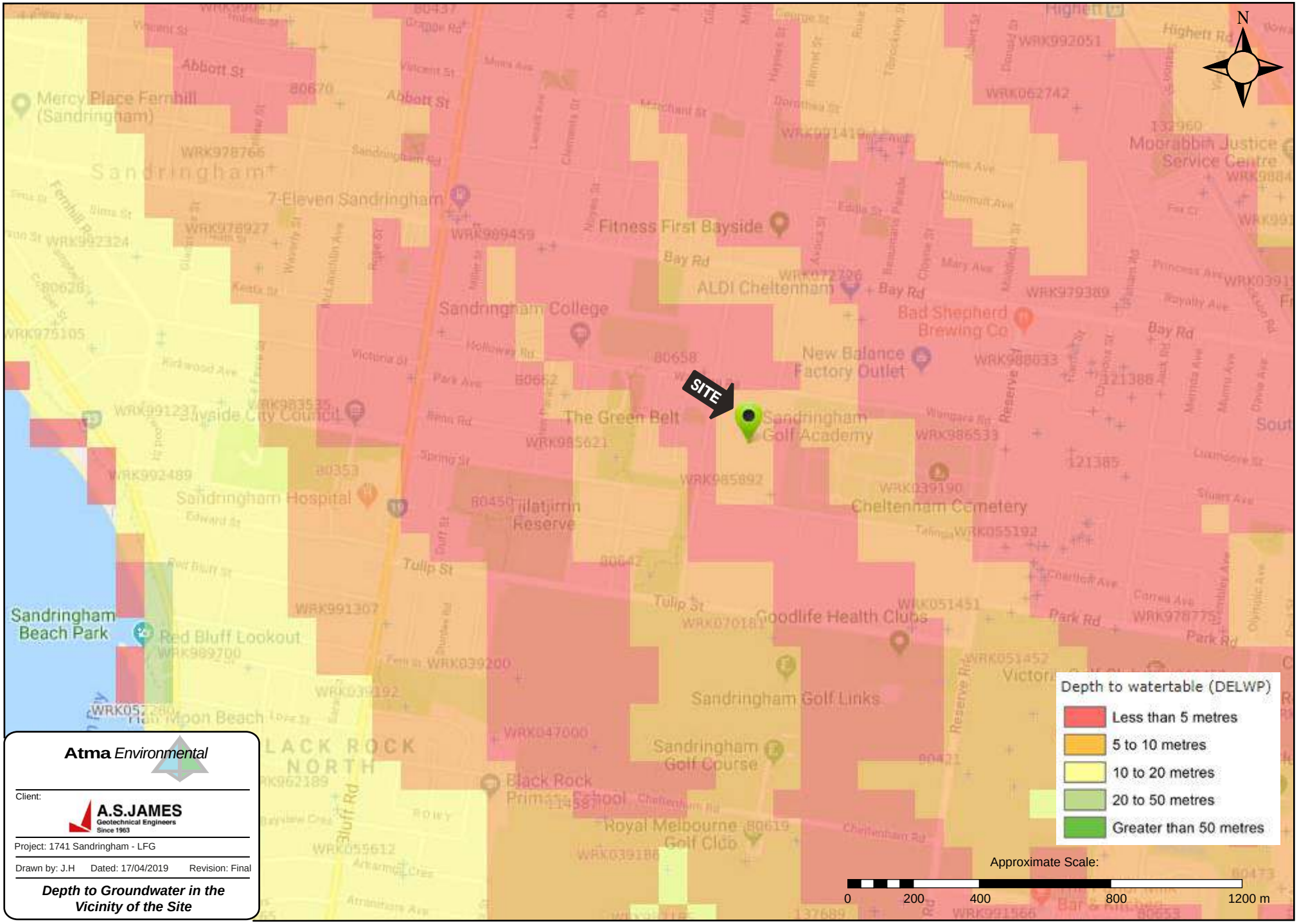
Atma *Environmental*

Client: A.S.JAMES Geotechnical Engineers Since 1963

Project: 1741 Sandringham - LFG

Drawn by: J.H Dated: 17/04/2019 Revision: Final

Geology of the Site and Surrounding Area



Atma *Environmental*

Client: A.S.JAMES Geotechnical Engineers Since 1963

Project: 1741 Sandringham - LFG

Drawn by: J.H Dated: 17/04/2019 Revision: Final

Depth to Groundwater in the Vicinity of the Site

Job No 15845856

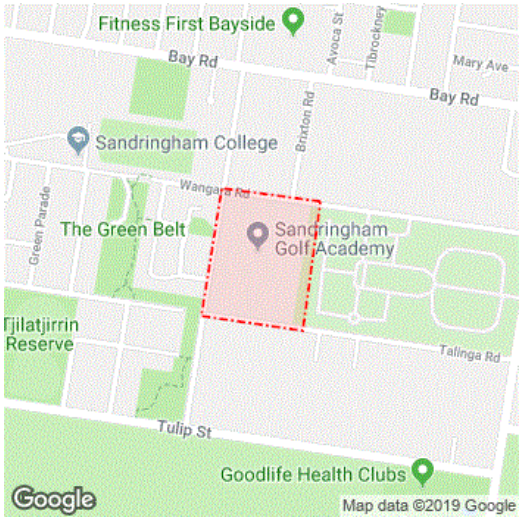
Phone: 1100
www.1100.com.au

Caller Details

Contact:	Mr Jared Hammett	**Caller Id:**	1511758	**Phone:**	0408577384
Company:	Atma Environmental	**Mobile:**	0408577384	**Fax:**	Not Supplied
Address:	56 William Street Abbotsford VIC 3067	**Email:**	jhammett@atmaenvironmental.com		

Dig Site and Enquiry Details

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



User Reference: 1741
Working on Behalf of: Private

Enquiry Date:	**Start Date:**	**End Date:**
28/02/2019	04/03/2019	22/05/2019

Address:
20 Wangara Road
Sandringham VIC 3191

Job Purpose:	**Onsite Activity:**
Design	Planning & Design
Location of Workplace:	**Location in Road:**
Private Property	Not Supplied

- Check the location of the dig site is correct. If not submit a new enquiry.
- If the scope of works change, or plan validity dates expire, resubmit your enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:
Not Supplied

Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- **For more information on safe excavation practices, visit www.1100.com.au**

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.
Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
80740649	Bayside City Council	0395994392	NOTIFIED
80740654	Melbourne Water	0396796866	NOTIFIED
80740652	Multinet Gas	0395358326	NOTIFIED
80740655	NBN Co, VicTas	1800626762	NOTIFIED
80740653	South East Water Corporation	0395523459	NOTIFIED
80740651	Telstra VICTAS	1800653935	NOTIFIED
80740650	United Energy	1300131689	NOTIFIED

END OF UTILITIES LIST

-15595 N

7130 E

CAP HOLLOWAY COOKE

HOLLOWAY RD

GEORGE HOLLOWAY

GEORGE 8-WANGARA

BRIXTON 8-WANGARA

WANGARA 17-BRIXTON

BRIXTON

WANGARA-BRIXTON

WANGARA N43-GEORGE

WANGARA 47 RESE

WANGARA RD

CAP WANGARA BRIXTON

ST

HOLLOWAY CL

BALMORAL AV

FORREST CT

BALMORAL

AV

REGENT CT

REGENT

BALMORAL AV

BALMORAL

COOKE ST

GEORGE -BALMORAL

AV

ST

D'ARCY ST

GEORGE -TALINGA

TALINGA

TALINGA -WANDARRI

WANDARRI

WANDARRI TALINGA

LENTARA

LENTARA TALINGA

TALINGA LENTARA

MMB

7130 E

-16224 N

UNITED ENERGY DISTRIBUTION

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No part of this plan may be reproduced in any form without written permission from United Energy.

WARNING

Please be advised this is an extract of United Energy Distribution assets.

This is a representation only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation.
Please read all conditions & information on the attached information sheet.

This extract is subject to those conditions.

NOTE: The information contained on this plan is only valid for 28 days from the date of issue.

0m 60m 120m 180m 240m

SCALE: 1:2500

This plan must be printed in colour in order to protect the integrity of the information.

Please note that the information contained in United Energy's GIS system is constantly being updated, and the information contained in these plans is subject to change.
To the best of our knowledge this information is accurate at the date of issue, United Energy does not accept liability for any loss suffered as a result of reliance on the information.
If you have any queries, please contact the Service Provider listed on the attached coversheet.

Legend

Electrical [Electricity]

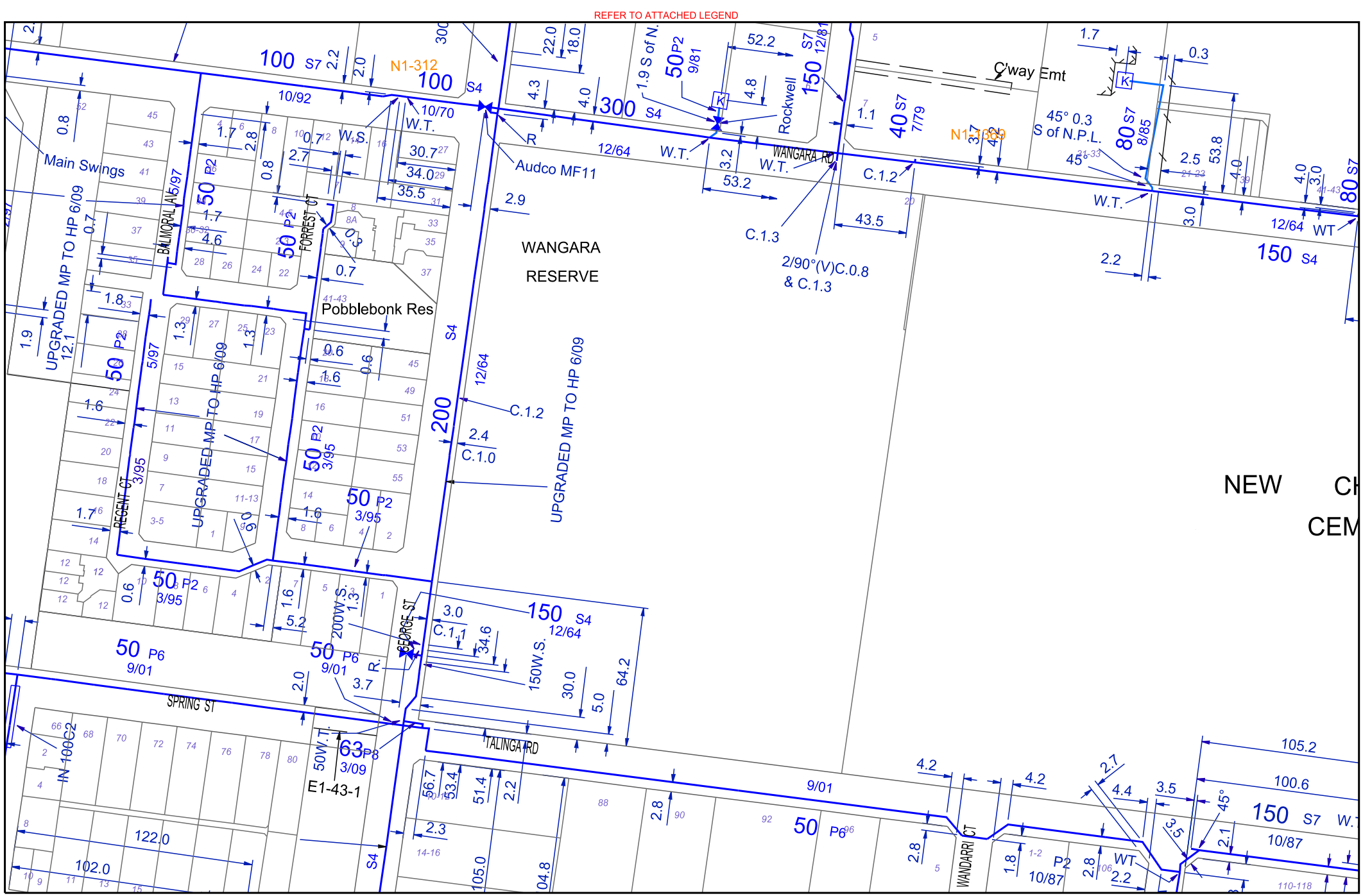
- HV Cable Head,11kV location
- HV UG Cable,11kV location
- HV UG Cable,abandoned location
- HV UG Cable,removed location
- LV UG Cable,Abandoned Location
- LV UG Cable,Mains Location
- LV UG Cable,proposed location - mains (distributor)
- LV UG Cable,Service Location
- LV UG Cable,Street Lighting Location - Valid

MELWAY REF : 77 C12

ISSUE DATE : 28/02/2019

DBYD Sequence Number: 80740650

SYSTEM PLAN : CARRUM 2500/10.30



LOW PRESSURE	UP TO 7 kPa	
MEDIUM PRESSURE	7 kPa - 200 kPa	
HIGH PRESSURE	100 kPa - 515 kPa	
TRANSMISSION PRESSURE	IN EXCESS OF 550 kPa	
ISOLATED MAINS		
PROPOSED MAINS		

0m 40m 80m 120m 160m

SCALE: 1:2500

-:DIMENSIONS ARE IN METRES
-:PIPE SIZES ARE IN MILLIMETRES

DIAL BEFORE YOU DIG 1100

N

DBYD Sequence Number: 80740652
MELWAYS REF : 77 C12
DATE OF ISSUE : 28/02/2019

FURTHER ASSISTANCE MAY BE OBTAINED IF NECESSARY: SEE COVER LETTER FOR CONTACT DETAILS

THIS PLAN MUST BE PRINTED IN COLOUR IN ORDER TO PROTECT THE INTEGRITY OF THE INFORMATION

THIS INFORMATION IS VALID FOR 28 DAYS FROM THE DATE OF ISSUE

Multinet Gas Networks

MULTINET GAS
ABN 53 634 214 009

NOTICES

MULTINET GAS HAS TAKEN CARE TO ENSURE THAT THE LOCATIONS OF GAS MAINS SHOWN ON THIS PLAN ARE ACCURATE. HOWEVER, SOME VARIATIONS FROM RECORDS DO EXIST AND COMPLETE ACCURACY CANNOT BE GUARANTEED. IN ALL INSTANCES IT IS ESSENTIAL THAT THE POSITION OF PIPES CONCERNED BE PROVED BY HAND EXCAVATION. NETWORK PRESSURES DO NOT INDICATE AVAILABLE METERING PRESSURES. PLEASECONTACT YOUR RETAILER TO CONFIRM AVAILABLE METERING PRESSURES NOTICE IS HEARBY GIVEN THAT IT IS AN OFFENCE TO DAMAGE GAS COMPANY PROPERTY. (GAS INDUSTRY ACT 1994, SECTION 56)

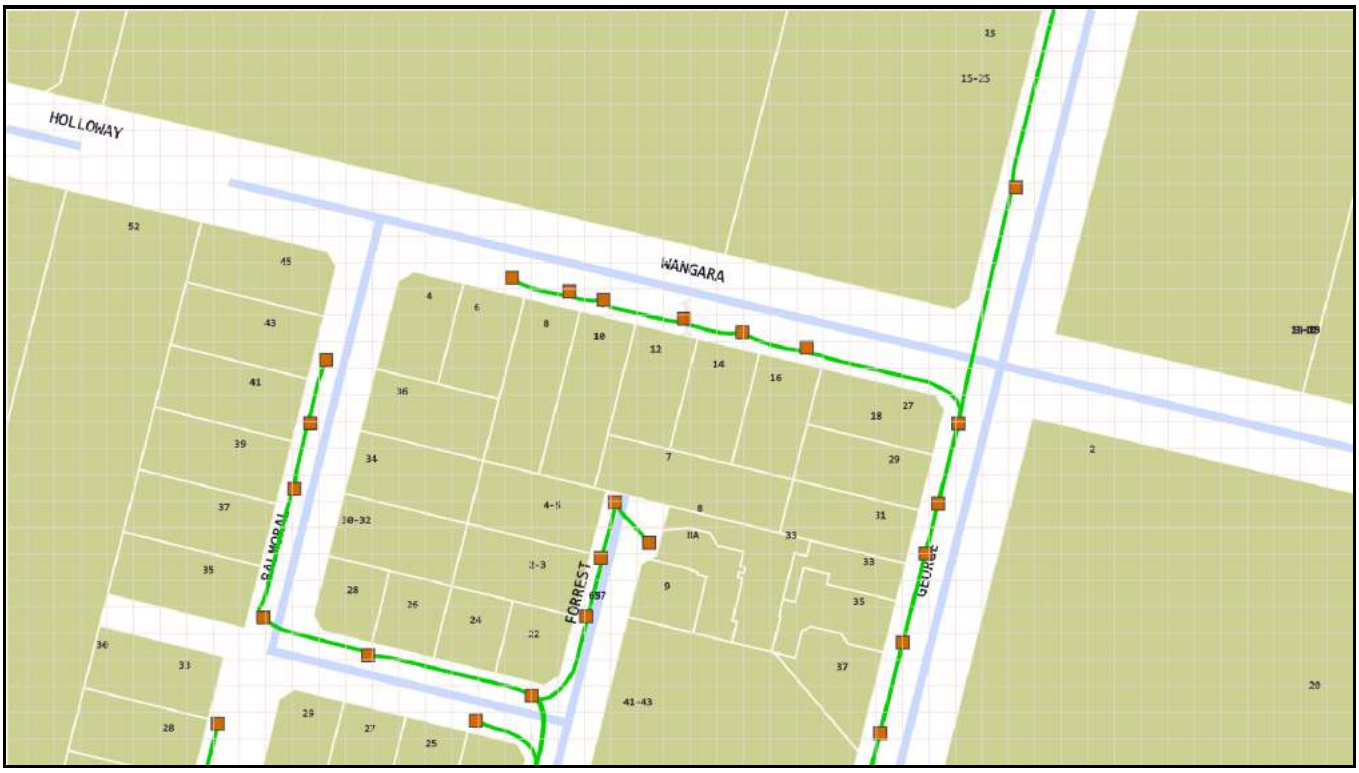
Indicative Plans

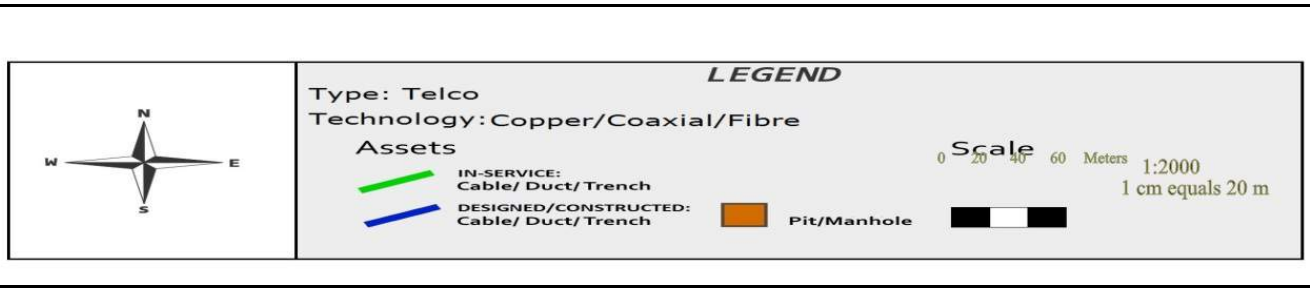
Issue Date:	28/02/2019
Location:	20 Wangara Road , Sandringham , VIC , 3191

1	4
2	5
3	6



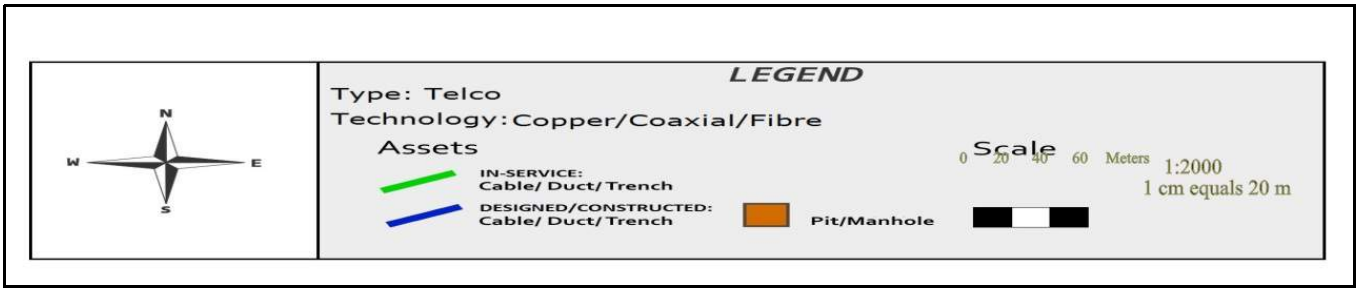
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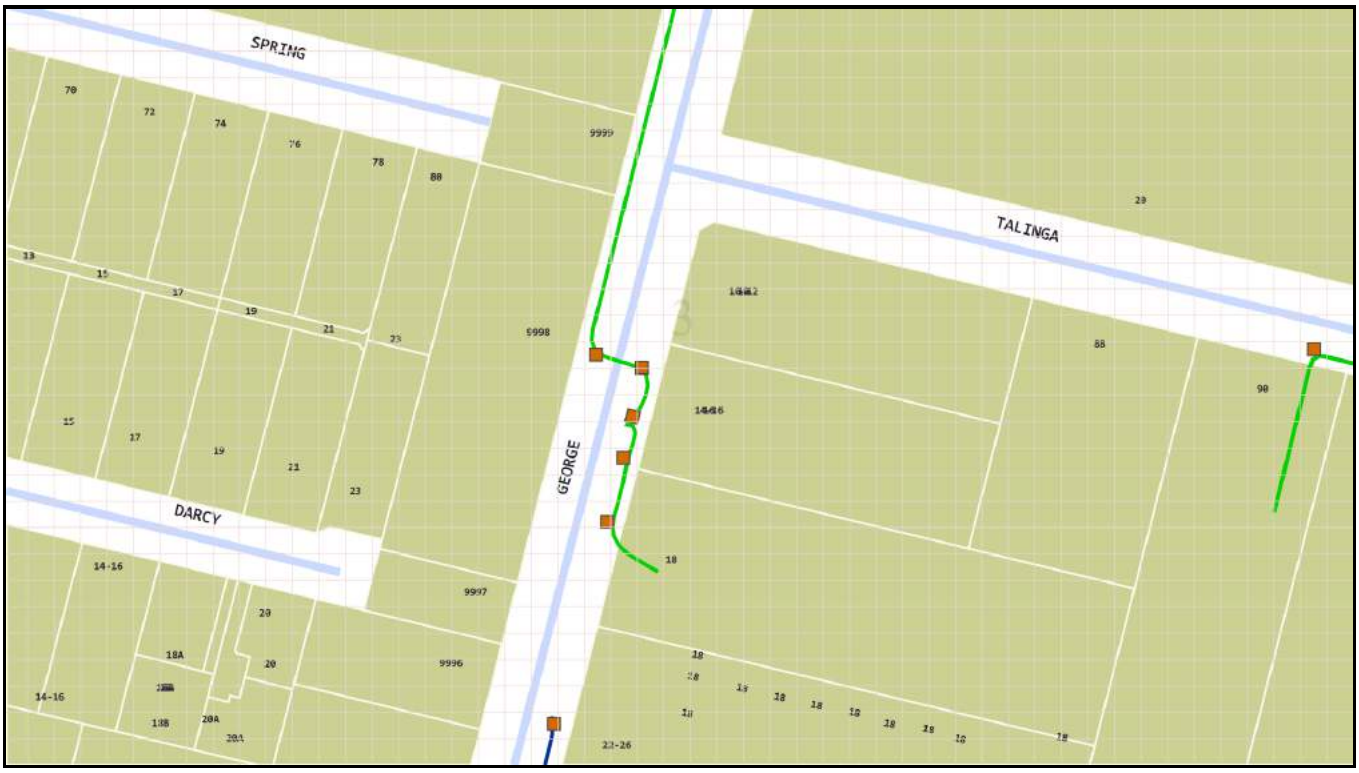


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Email info@nbn.com.au Web nbn.com.au





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LEGEND

Type: Telco

Technology: Copper/Coaxial/Fibre

Assets

IN-SERVICE: Cable/ Duct/ Trench

DESIGNED/CONSTRUCTED: Cable/ Duct/ Trench

Pit/Manhole

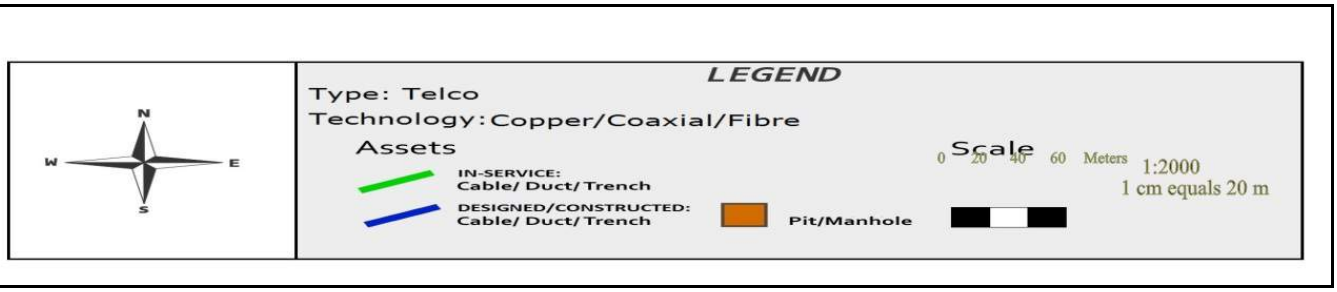
Scale 0 20 40 60 Meters

1:2000

1 cm equals 20 m

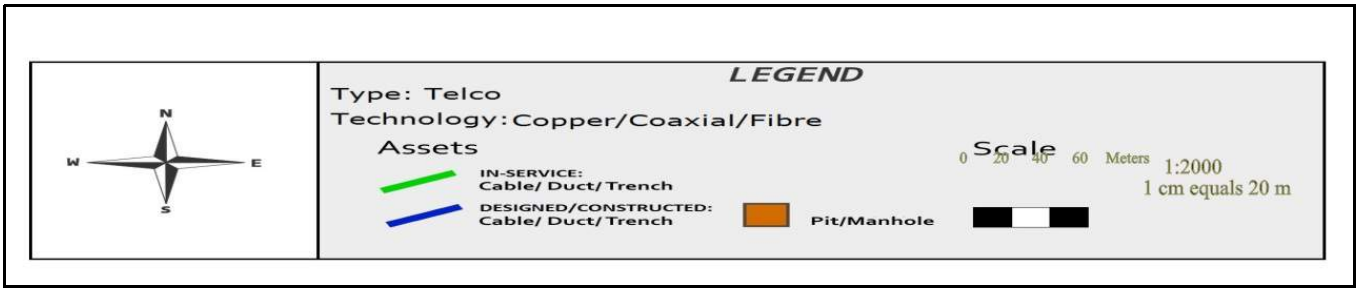
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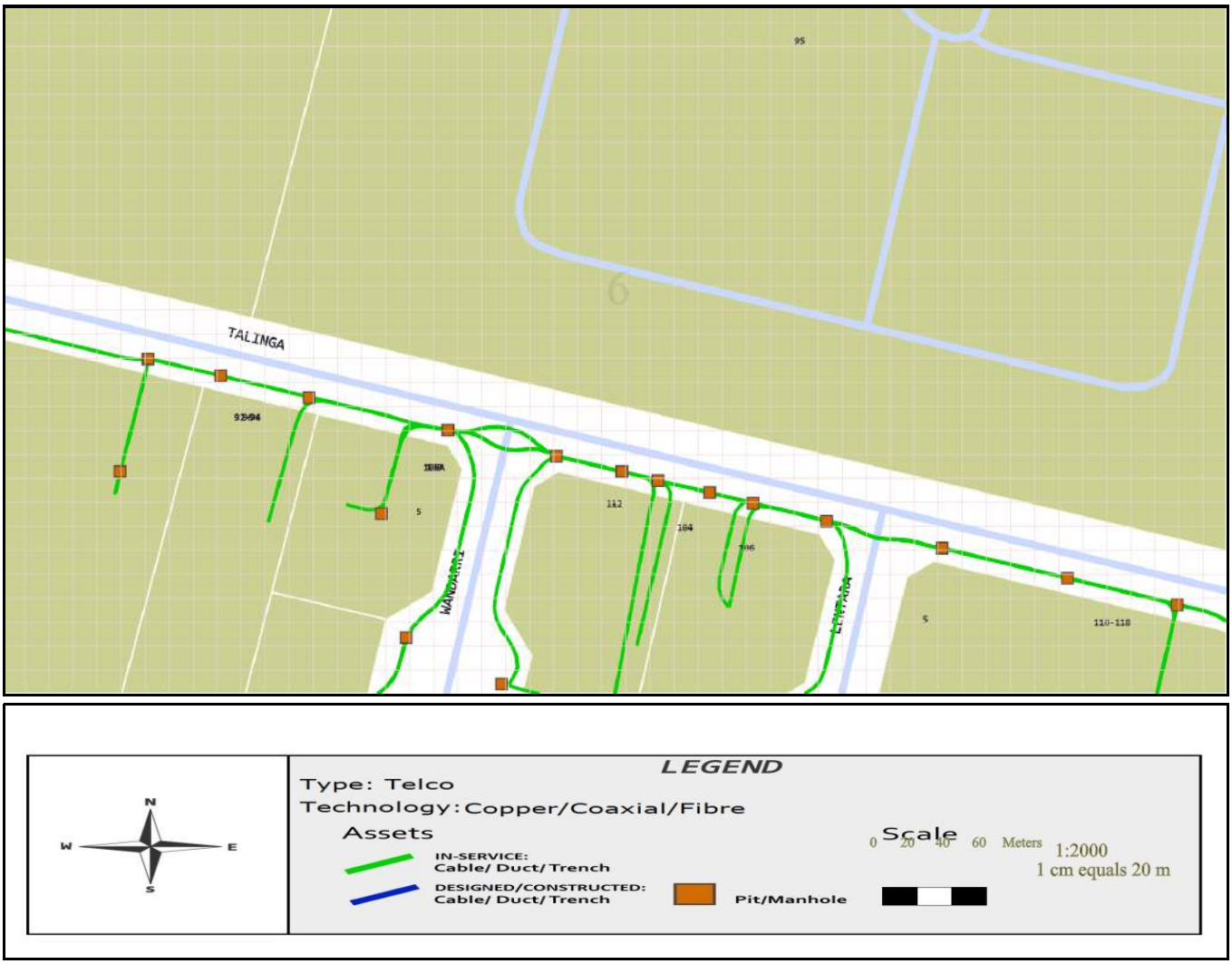


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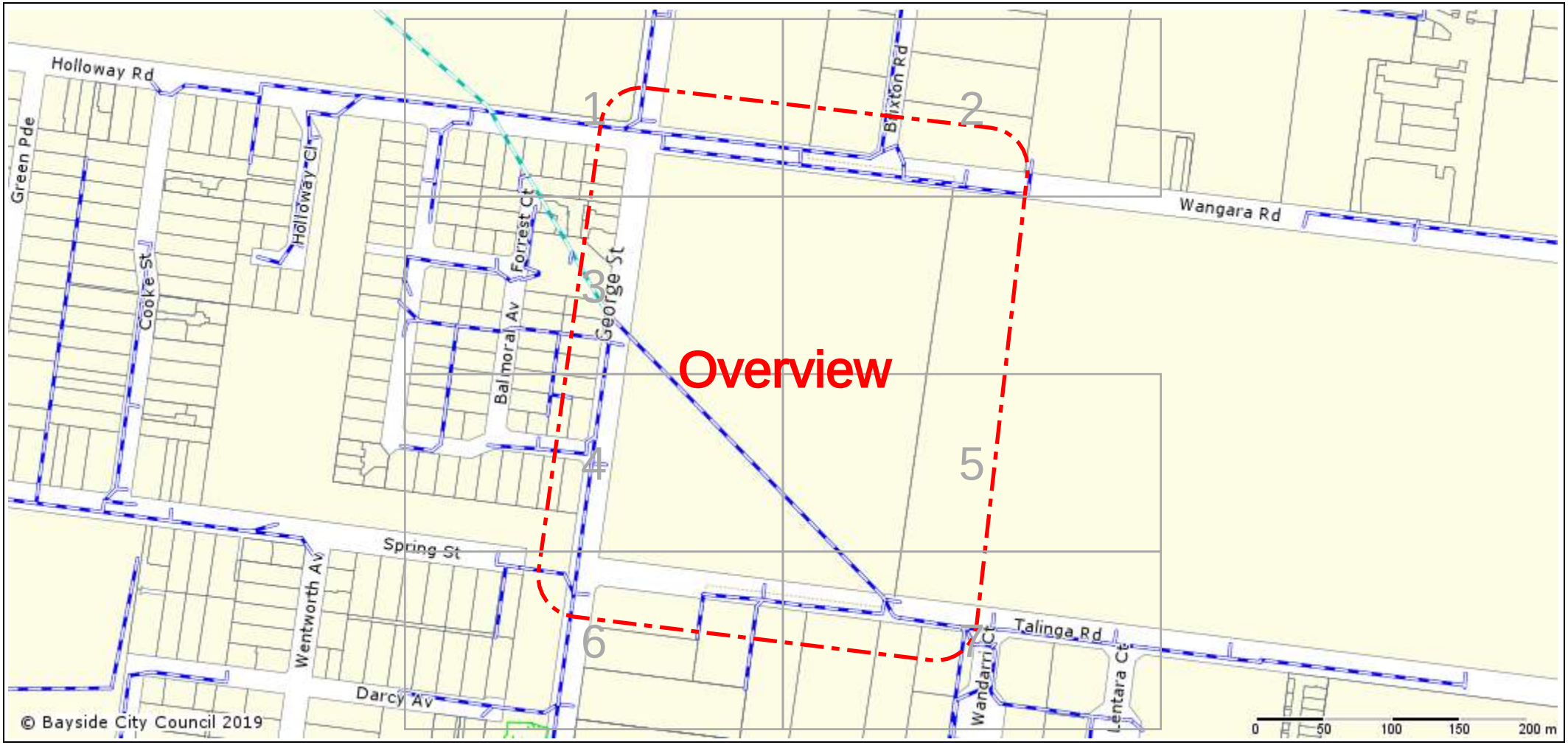


Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

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Sequence Number: 80740649
Job Number: 15845856
Location: 20 Wangara Road, Sandringham, VIC 3191



Data Generated: 28/02/2019 **Scale:** 1:4100

Legend

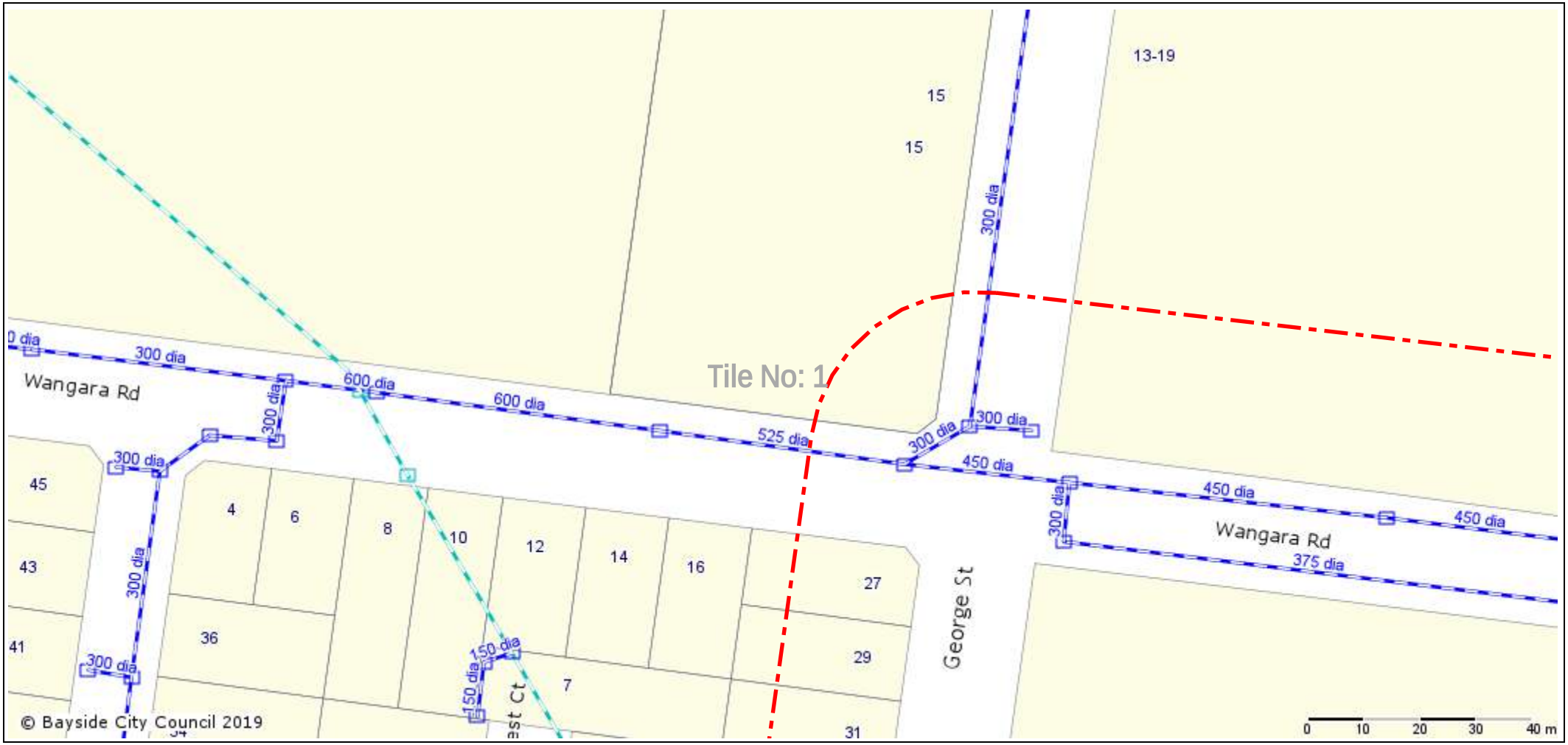
- LGA
  - Bayside
  - Other
- Property
- Significant Tree
- Significant Flora
- Drainage Pipe
  - Bayside/(Private)
  - Other LGA
  - Melbourne Water
  - VicRoads
  - Bayside Sewer
  - Bayside Water Supply
- Drainage Pit
  - Bayside\(Private)
  - Other LGA
  - Melbourne Water
  - VicRoads

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Details MUST be verified on site. Please report any variations to Council. Before commencing work in a road reserve, or connecting into a Council drain, a Road Opening Permit must be obtained from Council and all underground service authorities notified.

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Sequence Number: 80740649
Job Number: 15845856
Location: 20 Wangara Road, Sandringham, VIC 3191



Data Generated: 28/02/2019 **Scale:** 1:1000

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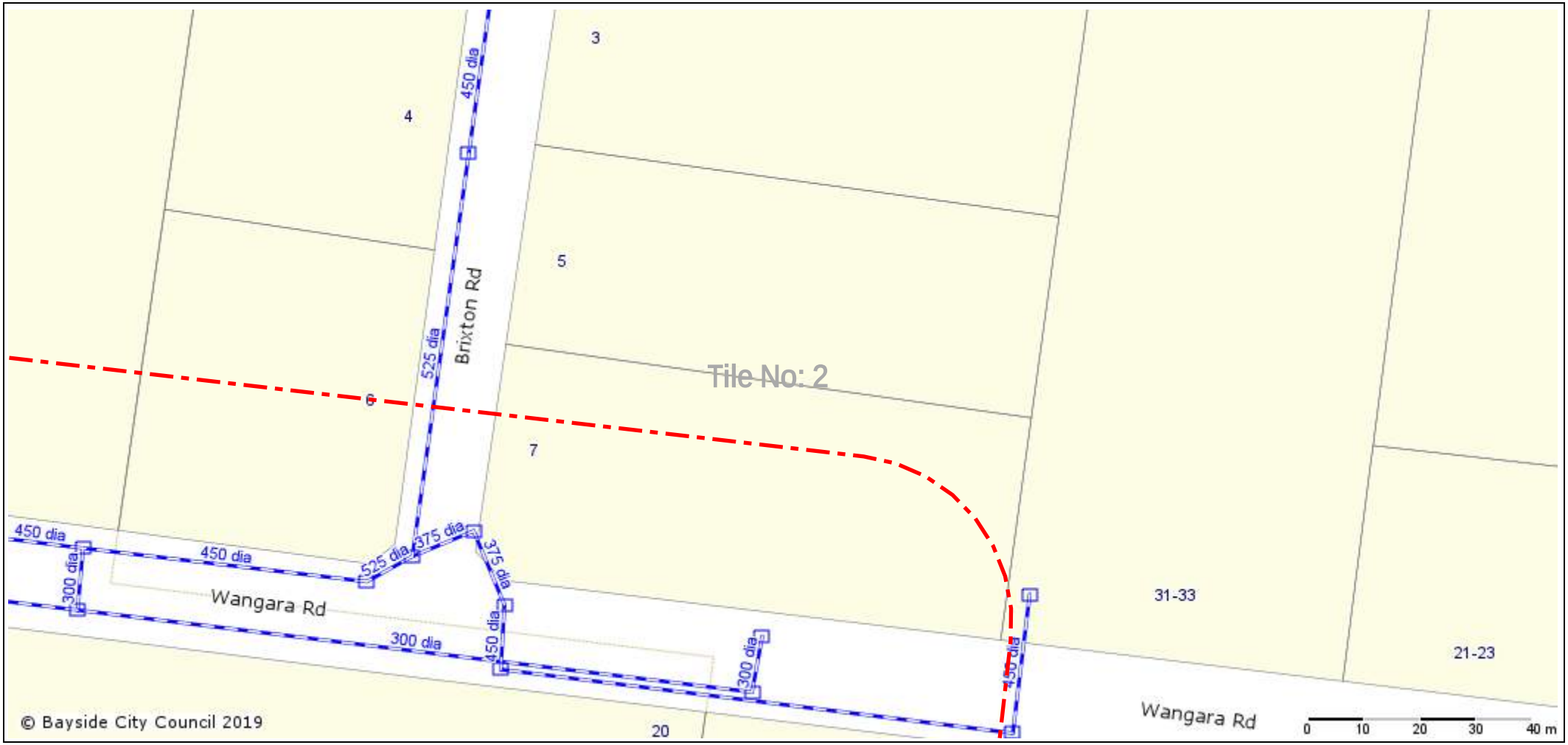
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Legend

- LGA
  - Bayside
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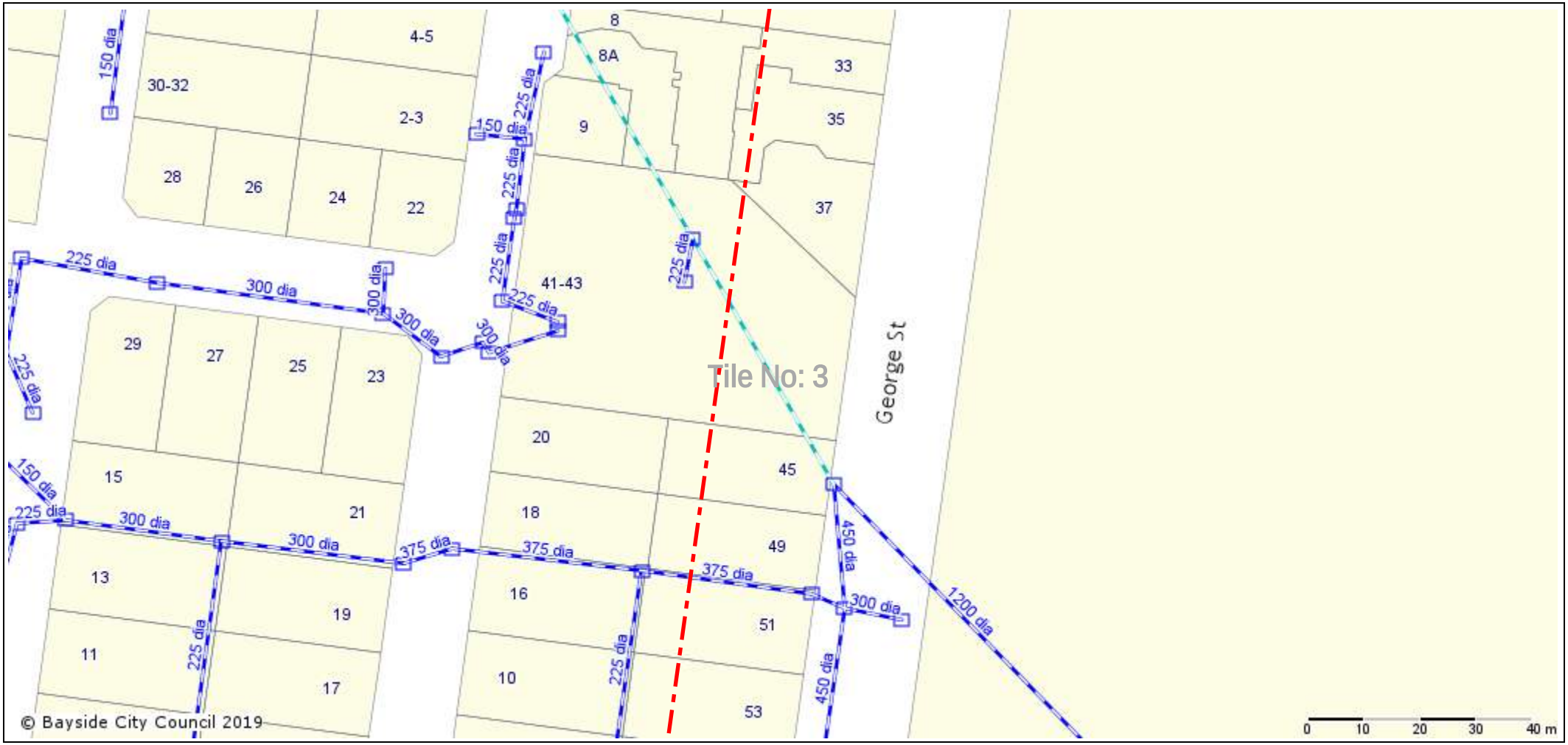
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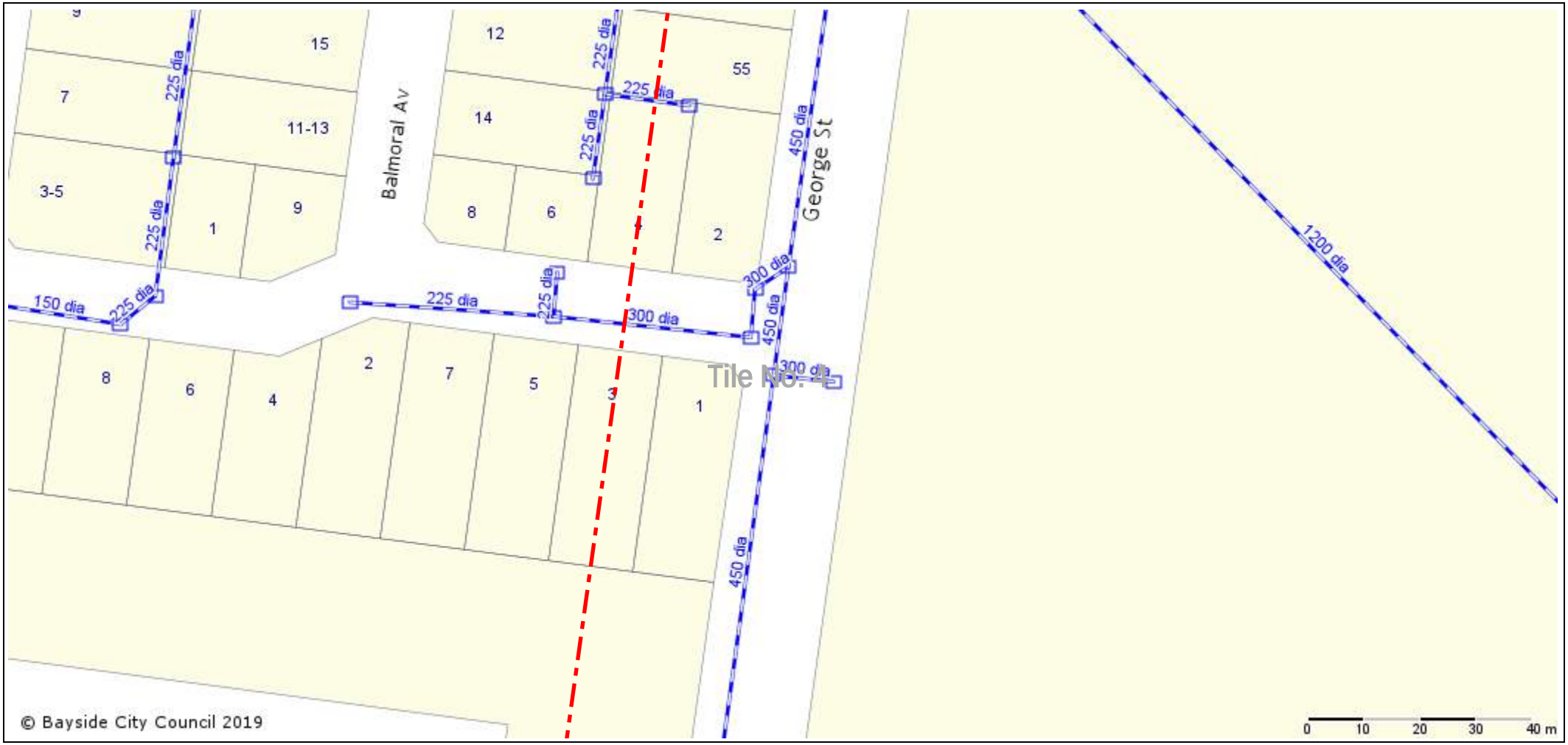
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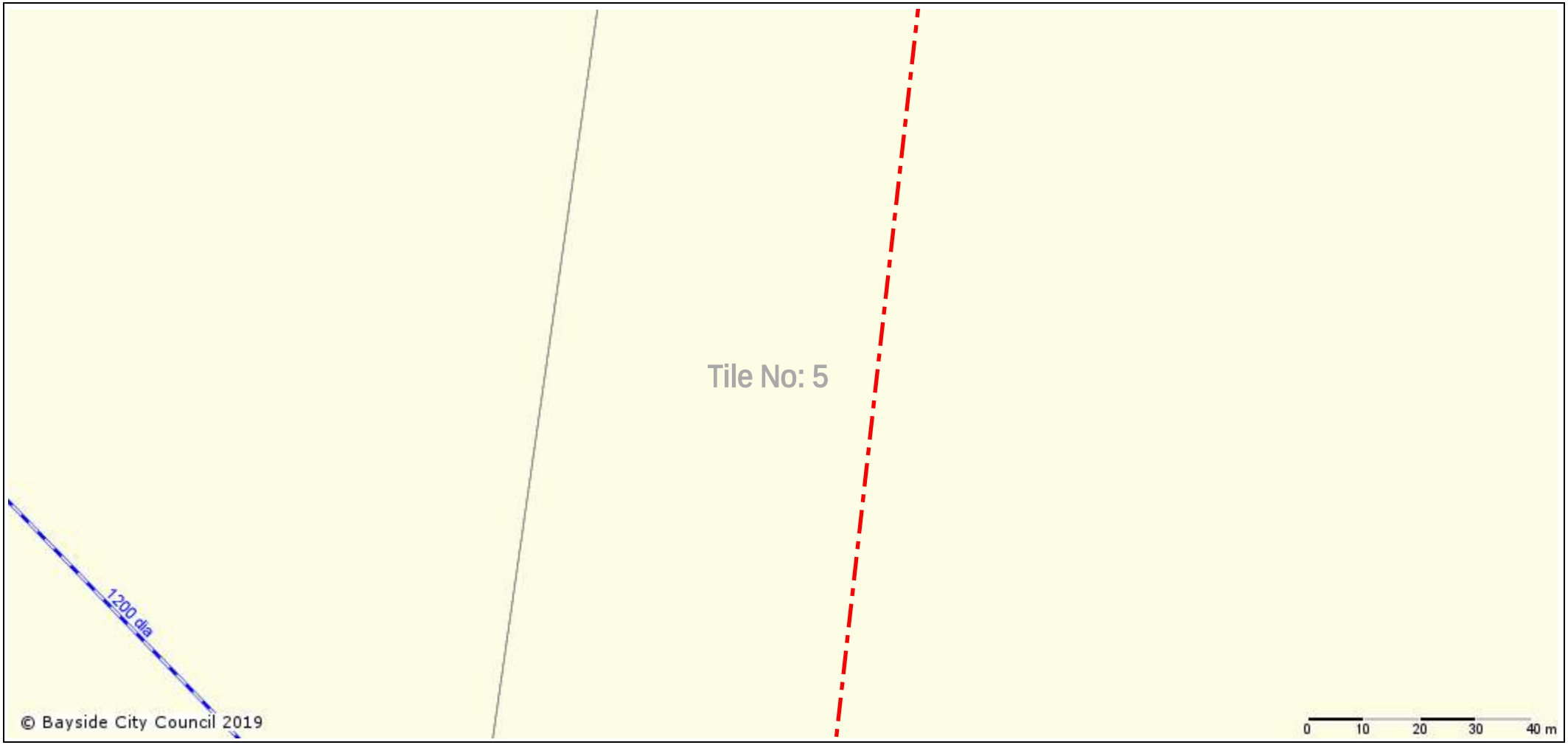
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Sequence Number: 80740649
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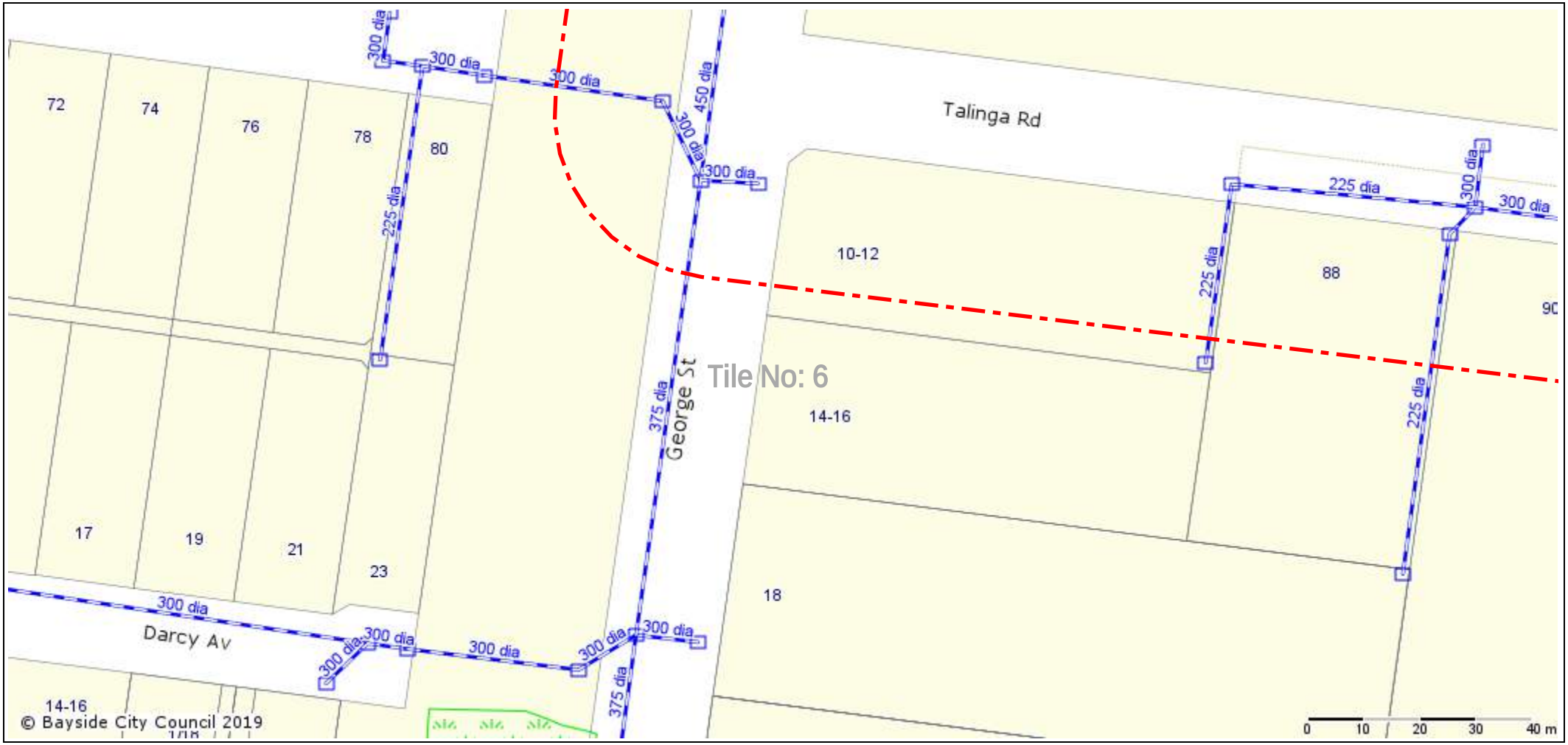
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Sequence Number: 80740649
Job Number: 15845856
Location: 20 Wangara Road, Sandringham, VIC 3191



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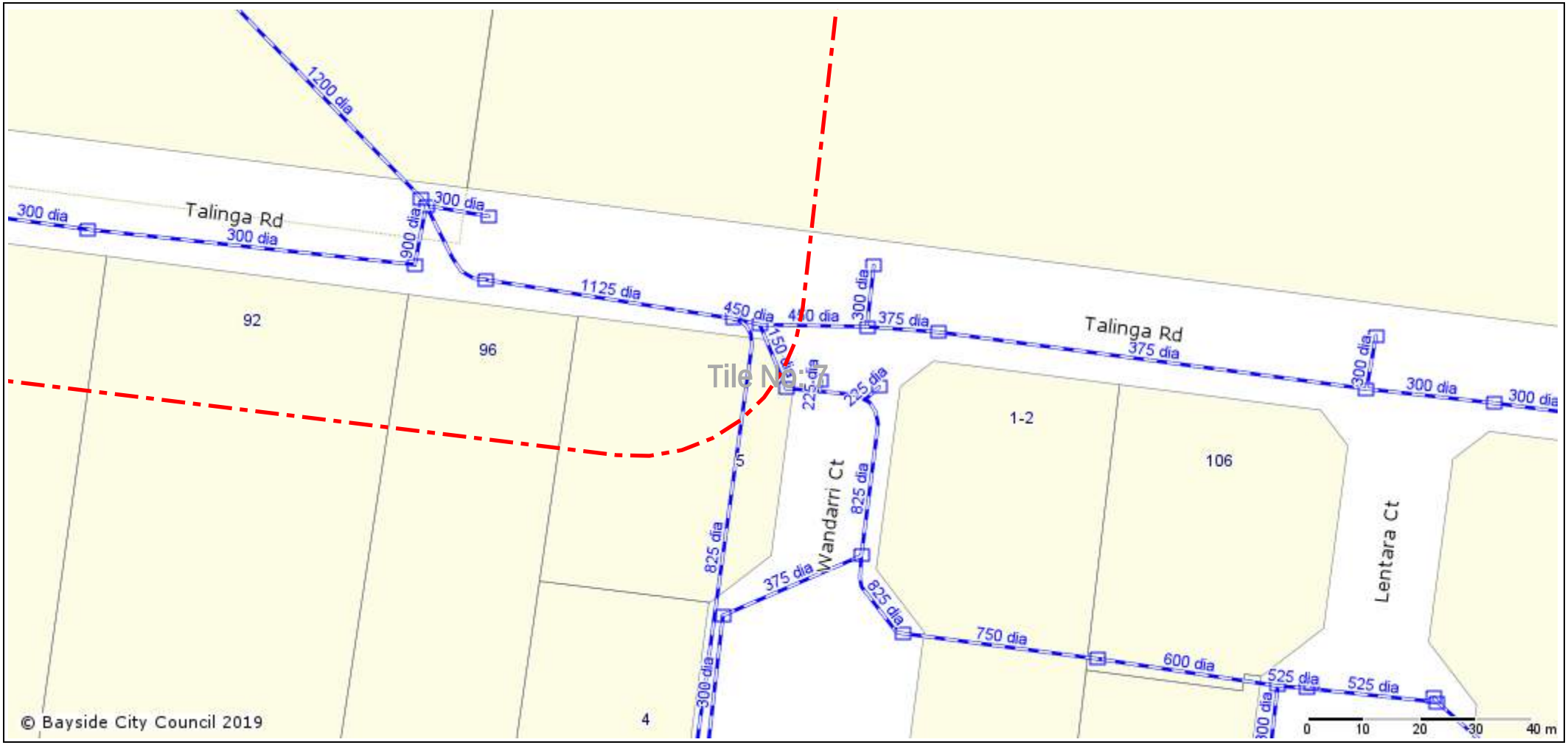
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Job Number: 15845856
Location: 20 Wangara Road, Sandringham, VIC 3191



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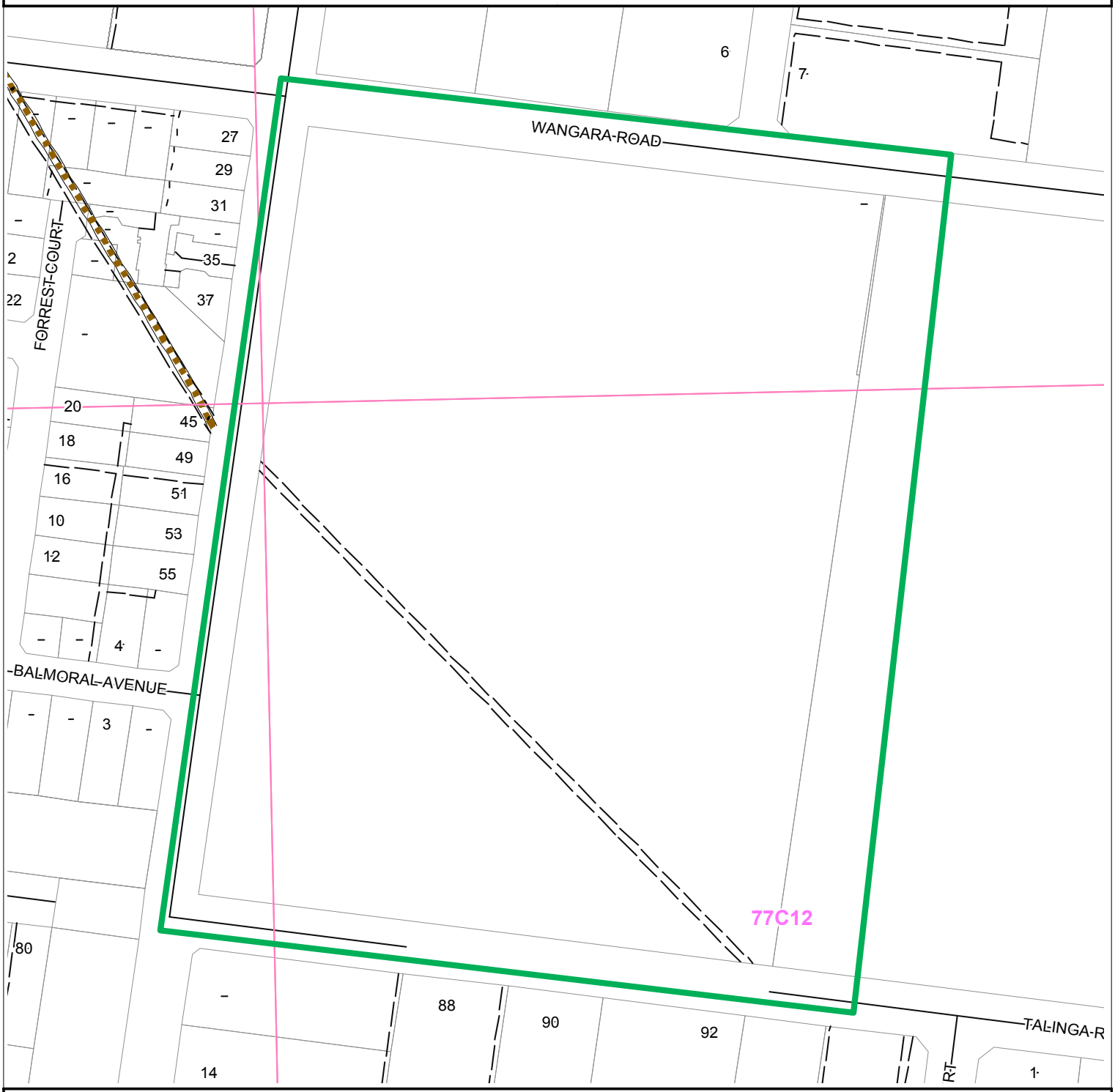
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- Drainage Pit
  - Bayside\(Private)
  - Other LGA
  - Melbourne Water
  - VicRoads

Drainage Assets Plan

DBYD Sequence Number: 80740654
DBYD Job No. 15845856



Address: 20 Wangara Road, Sandringham, VIC, 3191
Map Ref: Melways 77B11, 77B12, 77C11, 77C12
Date Supplied: 28/02/2019

1:2000

Drainage pipeline
Open drainage channel
Natural waterway (River/Creek)

Area of interest
Easement
Property boundary
X House number unknown
345F4 VicRoads map reference
27D4 Melway map reference

DIAL BEFORE YOU DIG www.1100.com.au

Melbourne Water

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

28 FEBRUARY 2019

Mr Jared Hammett
E-mail: jhammett@atmaenvironmental.com

WatersEdge
101 Wells Street
Frankston VIC 3199
PO Box 2268
Seaford VIC 3198 Australia
Telephone +61 3 9552 3000
southeastwater.com.au

Dear Sir/Madam,

SEW Reference Case Number 33245925
DBYD Sequence Number: 80740653
Location: 20 Wangara Road Sandringham 3191
Directory: Melways 77B11
Service Requested: Asset Information Dial-Before-You-Dig
SEW Order Number: 32636507

Please find attached information regarding your application to Dial Before You Dig for Asset Information.

Care must be taken when digging in the vicinity between Water Main to meter as service pipes could exist and may not be shown on the plan.

Any damage done to Utility assets will result in those responsible being billed for the repair work

Any works within the vicinity of a South East Water asset must conform with the guidelines specified in the documents 'Protection of South East Water Supply Assets' and/or 'Protection of South East Water Sewerage Assets'. Formal consent from South East Water is required where works are planned within one metre of an asset. General conditions are outlined in the document Guidelines for Proposed Works Over / Adjacent to Water Authority Assets up to and including 225 diameter.

Where works are planned within one metre of an asset, an application is required to be submitted through South East Water's online application portal, PropertyConnect. Formal consent or advice will be provided in response after review of the application.

IMPORTANT:

South East Water shall not have any warranty and makes no representation or guarantee as to the accuracy or scale of these plans. South East Water does not accept any liability for any loss, damage or inquiry by any reason as a result of inaccuracy in these plans.

The location of assets must be proved in the field by the applicant prior to the commencement of work. These plans do not indicate private services.

Assets labelled AC may contain asbestos and therefore works on these assets must be undertaken in accordance with OH&S regulations.

Metallic water mains and associated fittings may pose an electrocution hazard if electrical earth wires have been connected to the property service or water main.

Please be aware that works such as ground anchors, pile driving and site retention have special conditions and works must not commence without formal consent from South East Water.

Access to any South East Water asset i.e maintenance structure, must only be undertaken by an accredited contractor with prior consent.

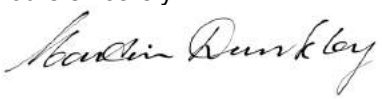
For mobile maps SEWmap use our free downloadable mobile map app that provides access to our property, water, Sewer and recycling assets, look for it on the South East Water website.

If you have any enquiries please contact Property Information on 9552 3459.

DISCLAIMER:
The plans accompanying this letter are issued solely for asset identification purposes and should not be used for any other purpose. South East Water provides the information it has on Sewer, Water and Recycled Water assets, but does not guarantee the accuracy of information and therefore the location of all assets must be proven on site prior to the commencement of any works.

South East Water will not accept claims associated with any incorrect or incomplete information being contained on the plan. Due to ongoing potential asset changes this plan should not be reused at a later date, a new plan should be obtained.

Yours sincerely



Martin Dunkley
MANAGER ASSET INFORMATION SYSTEMS

South East Water

ASSET INFORMATION - WATER

DIAL BEFORE YOU DIG www.1100.com.au

Property: 20 Wangara Road, Sandringham VIC 3191

Case Number: 33245925

Sequence Number: 80740653

72 0 72 145

Scale in Metres

Date: 28 February 2019

77B11,77B12,77C11,77C12



WARNING : This plan is issued solely for the purpose of assisting you in identifying South East Water's specified assets through further investigation only. It is not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. (Refer to attached letter for further details). Assets labelled AC may contain asbestos and therefore works on these assets must be undertaken in accordance with OH&S Regulations

Title/Road Boundary	Chlorination Assembly	Hydrant	Electrolysis
Proposed Title/Road	Water Main Valve	Fireplug/Washout	
Easement	100 CICL 26.9.1975 Water Main	~ 1.0 Offset from Boundary	

South East Water

ASSET INFORMATION - SEWER

DIAL BEFORE YOU DIG www.1100.com.au

Property: 20 Wangara Road, Sandringham VIC 3191

Case Number: 33245925

Sequence Number: 80740653

72 0 72 145

Scale in Metres

Date: 28 February 2019

77B11,77B12,77C11,77C12



WARNING: This plan is issued solely for the purpose of assisting you in identifying South East Water's specified assets through further investigation only. It is not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. (Refer to attached letter for further details). Assets labelled AC may contain asbestos and therefore works on these assets must be undertaken in accordance with OH&S Regulations

Title/Road Boundary	End of Pipe	Maintenance Hole
Proposed Title/Road	Sewer Main	Inspection Shaft
Easement	225 VC / 280 MOR — Direction of Flow	<1.0> Offset from Boundary

ASSET INFORMATION - RECYCLED WATER

Property: 20 Wangara Road, Sandringham VIC 3191

Case Number: 33245925

Sequence Number: 80740653

72 0 72 145

Scale in Metres

Date: 28 February 2019

77B11,77B12,77C11,77C1



WARNING : This plan is issued solely for the purpose of assisting you in identifying South East Water's specified assets through further investigation only. It is not to be used for any other purpose, including to identify any other assets, property boundaries or dimensions. Accordingly, the location of all assets should be proven by hand on site prior to the commencement of any work. (Refer to attached letter for further details). Assets labelled AC may contain asbestos and therefore works on these assets must be undertaken in accordance with OH&S Regulations

Title/Road Boundary	Chlorination Assembly	Hydrant	
Proposed Title/Road	Recycled Water Main Valve	Fireplug/Washout	
Easement	100 CICL 26.9.1975 Recycled Water Main	~ 1.0	Offset from Boundary

APPENDIX B

Site Photographs



Photo 1: Typical site aspect – looking NE



Photo 2: Typical waste mass



Photo 3: Landfill embankment (west)



Photo 4: Leak testing LFG03



Photo 5: GA5000 at LFG01



Photo 6: Typical site aspect – looking SW



Photo 7: Typical site aspect – looking South



Photo 8: GA5000 at LFG01



Photo 9: GA5000 at LFG03



Photo 10: Methane survey (off-site drain)



Photo 11: GasClam at LFG02



Photo 12: Looking south across driving range

APPENDIX C

Landfill Gas Investigation Documents

Soil Gas Bore: LFG01

Project Ref. No: 1741
Project Name: Sandringham
Completion Date: 11/02/2019
BCL No: n/a
Drilling Contractor: AS James
Page Number: 1 of 1
Drilling Method: Flight Auger
Drillers Licence No: n/a
Logged By: KO/HB
Bore Diameter (mm): 150
Well Depth (m): 9.0
OVA Type: PID MiniRAE 2000
Well Diameter (mm): 50
Well Material: PVC Class 18
Easting: n/a
Casing Stickup (m): 0.5
TOC Elevation (AHD): n/a
Northing: n/a
Location Description: See Figure 1
Datum: n/a

Depth (m bgl)	Geological Description	Graphic Symbol	Depth	Sample Type	Sample ID	OVA (ppm)	Bore Construction Details	Additional Observations
	Ground Surface		0.0					
	FILL SAND, minor silt, light greyish brown, loose, fine grained, damp, with inclusions of steel, plastic, and gravel		1.0 2.0 3.0					trace sweet odour
3.8	FILL Silty SAND, blackish grey, dense, fine to medium grained, moist, with inclusions of steel, plastic, and gravel		4.0 5.0 6.0 7.0					minor hydrocarbon odour
8.0	Sandy SILT Trace clay, light grey, no plasticity to low plasticity, fine grained, very stiff, damp		8.0					
9.0	End of Log		9.0 10.0					

Groundwater Observations -

Depth Water Encountered During Drilling (mbNS): N/A

Post Install Water Level (mbNS): N/A

Sample Type -

- **Hand Auger**
- **Solid Stem Auger**
- **Push Tube**
- **Split Spoon**
- **R.A.B**

Monitoring Well Construction Key -

- **Screen**
- **Bentonite**
- **Filter Pack**
- **Grout**
- **Backfill**

Soil Gas Bore: LFG02

Project Ref. No: 1741
Project Name: Sandringham
Completion Date: 11/02/2019
BCL No: n/a
Drilling Contractor: AS James
Page Number: 1 of 1
Drilling Method: Flight Auger
Drillers Licence No: n/a
Logged By: KO/HB
Bore Diameter (mm): 150
Well Depth (m): 9.0
OVA Type: PID MiniRAE 2000
Well Diameter (mm): 50
Well Material: PVC Class 18
Easting: n/a
Casing Stickup (m): 0.5
TOC Elevation (AHD): n/a
Northing: n/a
Location Description: See Figure 1
Datum: n/a

Depth (m bgl)	Geological Description	Graphic Symbol	Depth	Sample Type	Sample ID	OVA (ppm)	Bore Construction Details	Additional Observations
	Ground Surface		0.0					
	FILL SAND, minor fine to medium gravel, brown, no plasticity, medium density, damp							
	FILL GRAVEL, brown, medium density, damp, with inclusions of steel and plastic		1.0					
1.5	FILL SILT, minor fine to medium gravel, brown, no plasticity, stiff, damp, with inclusions of brick fragments, clayey silt, plastic		2.0					
	FILL Silty SAND,no to low plasticity, fine grained, stiff, medium density, dry, with inclusions of minor clay, trace gravel, fabric, glass, steel, and plastic		3.0 4.0 5.0 6.0 7.0 8.0					
8.5	Clayey SILT Trace sand, light gray and light orange, fine grained, medium plasticity,stiff, damp		9.0					
9.0	End of Log		10.0					

Groundwater Observations -

Depth Water Encountered During Drilling (mbNS): N/A

Post Install Water Level (mbNS): N/A

Sample Type -

- **Hand Auger**
- **Solid Stem Auger**
- **Push Tube**
- **Split Spoon**
- **R.A.B**

Monitoring Well Construction Key -

- **Screen**
- **Bentonite**
- **Filter Pack**
- **Grout**
- **Backfill**

Soil Gas Bore: LFG03

Project Ref. No: 1741
Project Name: Sandringham
Completion Date: 04/02/2019
BCL No: n/a
Drilling Contractor: AS James
Page Number: 1 of 1
Drilling Method: Flight Auger
Drillers Licence No: n/a
Logged By: KO
Bore Diameter (mm): 150
Well Depth (m): 9.0
OVA Type: PID MiniRAE 2000
Well Diameter (mm): 50
Well Material: PVC Class 18
Easting: n/a
Casing Stickup (m): 0.5
TOC Elevation (AHD): n/a
Northing: n/a
Location Description: See Figure 1
Datum: n/a

Depth (m bgl)	Geological Description	Graphic Symbol	Depth	Sample Type	Sample ID	OVA (ppm)	Bore Construction Details	Additional Observations
	Ground Surface		0.0					
	FILL Silty SAND,brown, fine grained with minor fine to coarse gravel, medium density, dry, with inclusions of glass and steel		1.0					
1.5	FILL silty SAND, red,no plasticity to low plasticity, fine grained, dense, dry, with inclusions of minor clay and gravel, fabric, glass, steel and plastic		2.0 3.0 4.0 5.0 6.0 7.0 8.0					
8.5	Clayey SILT Trace fine sand, medium plasticity, stiff, damp		9.0					
9.0	End of Log		10.0					

Groundwater Observations -

Depth Water Encountered During Drilling (mbNS): N/A

Post Install Water Level (mbNS): N/A

Sample Type -

- **Hand Auger**
- **Solid Stem Auger**
- **Push Tube**
- **Split Spoon**
- **R.A.B**

Monitoring Well Construction Key -

- **Screen**
- **Bentonite**
- **Filter Pack**
- **Grout**
- **Backfill**

Gas Calibration Certificate

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument GA5000
Serial No. GA05726
Sensors CH4, CO2, O2, CO, H2S

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
Pump	Operation	✓	
	Filter	✓	
	Flow	✓	
	Valves, Diaphragm	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	O2	✓	
	CH4	✓	
	CO2	✓	
	H2S	✓	
	CO	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version		
Datalogger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.90%		Fresh Air	
H2S		25ppm H2S	NIST	ME594	25ppm H2S
CO		100ppm CO	NIST	ME594	100ppm CO
CH4		60% CH4	NIST	ME420	60% CH4
CO2		40% CO2	NIST	ME420	40% CO2

David Trengove

Calibration date: **28/02/2019**

Next calibration due: **27/08/2019**

Gas Verification Certificate

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument **Laser Inspectra**
Serial No. **860916**
Sensors **Laser**

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation					
	Filter					
	Flow					
	Valves, Diaphragm					
PCB	Condition	✓				
Connectors	Condition	✓				
			Low	**High**	**TWA**	**STEL**
Sensor	Laser	✓				
		✓				
		✓				
		✓				
		✓				
Alarms	Beeper	✓				
	Settings	✓				
Software	Version					
Datalogger	Operation					
Download	Operation					
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
Laser		500ppm CH4	NIST	200425	547 ppm CH4

Bump Test by: **Shenalie Fernando**

Date: **28/2/19**

Gas Calibration Certificate

Instrument GA5000
Serial No. G505726
Sensors CH4, CO2, O2, CO, H2S

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
Pump	Operation	✓	
	Filter	✓	
	Flow	✓	
	Valves, Diaphragm	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	O2	✓	
	CH4	✓	
	CO2	✓	
	H2S	✓	
	CO	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version		
Datalogger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.90%		Fresh Air	
H2S		25ppm H2S	NIST	ME594	25ppm H2S
CO		100ppm CO	NIST	ME594	100ppm CO
CH4		60% CH4	NIST	ME420	60% CH4
CO2		40% CO2	NIST	ME420	40% CO2

David Trengove

Calibration date: **13/03/2019**

Next calibration due: **9/09/2019**

Air-Met Scientific Pty Ltd

ABN 73 006 849 949

PO BOX 133, NUNAWADING 3131 VIC
P: 1300 137 067 W: www.airmet.com.au

Picking Slip

CUSTOMER DETAILS

ATMA Environmental Pty Ltd
56 William Street
Abbotsford
VIC
3067

Telephone No: 03 9429 6955

Issuing Depot:

Air-Met Scientific (Melbourne)
7-11 Ceylon Street
Nunawading
VIC
3131

Tel: 1300 137 067
Fax: 03 9877 1230
E-Mail: hire@airmet.com.au

CONTRACT NO: V016018

Date of Despatch: 29/03/2019
On Hire Date: 01/04/2019
Our Reference:
Account No 307038
Customer Order No: PO:1741 SANDRINGHAM

SITE ADDRESS

ATMA Environmental Pty Ltd
56 William Street
Abbotsford
VIC
3067

Site Contact Name: Jared Hammett
Telephone No: 03 9426 6955

ITEM NO	DESCRIPTION	BIN LOCATION	QTY	QUANTITY PICKED	SERIAL NUMBER
GA5000	GA5000 Landfill Gas Analyser (CH4,CO2,O2,H2S,CO)		1	1	GS06040
GA5K-BF	- GA5000 Brass Fitting		1	2	
GA5K-CHARGER	- GA5000 Charger		1	1	
GA5K-CTF	- GA5000 Concentration Tubing & Filter		1	1	
GA5K-FILTER	- GA5000 H2S Filter		1	1	
GA5K-FT	- GA5000 Flow Tube		1	1	
GA5K-MANUAL	- GA5000 Manual + D/LOAD CABLE		1	1	
GA5K-SF	- GA500 Spare Filter		1	3	
GA5K-SSTRAP	- GA5000 Shoulder Strap		1	1	
GA5K-SYT	- GA5000 Sample Yellow Tubing		1	1	
GTIGF5.1-R	- GA5000 Soft Cover		1	1	
GA5K-BST	- GA5000 Sample Blue Tubing		1	X	
GACASE	- GA5000 Hard Carry Case		1	1	

Gas Calibration Certificate

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Instrument GA5000
Serial No. G504209
Sensors CH4, CO2, O2, CO, H2S

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
Pump	Operation	✓	
	Filter	✓	
	Flow	✓	
	Valves, Diaphragm	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	O2	✓	
	CH4	✓	
	CO2	✓	
	H2S	✓	
	CO	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version		
Datalogger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.90%		Fresh Air	
H2S		25ppm H2S	NIST	ME594	25ppm H2S
CO		100ppm CO	NIST	ME594	100ppm CO
CH4		60% CH4	NIST	ME420	60% CH4
CO2		40% CO2	NIST	ME420	40% CO2

Shenalie Fernando

Calibration date: **12/04/2019**

Next calibration due: **9/10/2019**

Air-Met Scientific Pty Ltd

ABN 73 006 849 949

PO BOX 133, NUNAWADING 3131 VIC
P: 1300 137 067 W: www.airmet.com.au

Picking Slip

CUSTOMER DETAILS

ATMA Environmental Pty Ltd
56 William Street
Abbotsford
VIC
3067

Telephone No: 03 9429 6955

Issuing Depot:

Air-Met Scientific (Melbourne)
7-11 Ceylon Street
Nunawading
VIC
3131

Tel: 1300 137 067
Fax: 03 9877 1230
E-Mail: hire@airmet.com.au

72.7509.2250.4000-R	- Geotech Inspectra Laser Sampling Rod Telescopic With Suction Cap	1	1	
72.7601.3060.0520-R	- Geotech Inspectra Laser Charger	1	-	
72.7601.3060.0521-R	- Geotech Inspectra Laser Connection Cable	1	-	
72.7606.1060.0500-R	- Geotech Inspectra Laser Battery Pack	1	1	
72.7601.3060.0430-R	- Geotech Inspectra Laser Carrying Straps	1	1	
72.7501.3110.2000-R	- Geotech Inspectra Laser Felexible Hose	1	1	
72.7503.3080.1000-R	- Geotech Inspectra Laser Water Repellent Filter	1	1	
72.7606.3250.1000-R	- Geotech Inspectra Laser Dust Proof Filter	1	1	
72.7601.3060.0940-R	- Geotech Inspectra Laser Male Key 3mm With Handle	1	1	
72.7606.3210.0010-R	- Geotech Inspectra Laser Pin Wrench	1	1	
RIGIDROD-INSPLASER	- Geotech Inspectra Laser Rigid Rod	1	1	
MANUAL-INSPLASER	- Geotech Inspectra Laser Manual	1	1	
72.7601.3060.0500-R	- Geotech Inspectra Laser Case	1	1	

Gas Verification Certificate

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument **Laser Inspectra**
Serial No. **2990212**
Sensors **Laser**

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation					
	Filter					
	Flow					
	Valves, Diaphragm					
PCB	Condition	✓				
Connectors	Condition	✓				
			Low	**High**	**TWA**	**STEL**
Sensor	Laser	✓				
		✓				
		✓				
		✓				
		✓				
Alarms	Beeper	✓				
	Settings	✓				
Software	Version					
Datalogger	Operation					
Download	Operation					
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
Laser		500ppm CH4	NIST	999412	560 ppm CH4

Bump Test by: **Shenalie Fernando**

Date: **12/4/19**

Atma *Environmental*

EQUIPMENT CALIBRATION LOG

Instrument Type: MiniRAE 3000 PID

Model Number: PGM-7320
Serial Number: 592-903636

Calibration Method: Direct Connection to Isobutylene with flow valve

Calibration Gas Flow Rate: 0.5 L/min

Equipment Report:

Calibration	Actual Value (ppm)	Reading (ppm)	PASSED? (Y/N)
Zero – Fresh Air	0	0	✓
Span – Isobutylene	100	99.9	✓

Calibration Gas Composition:

Components	Concentration	Molecular Formula
Isobutylene	100 ppm *	i-C_4H_8
Air	Balance	Air

* +/- 2% accuracy relative.

Gas Prepared by: Calgaz – Division of Air Liquide Advanced Technologies U.S., LLC
Lot Number: 1767154 Cyl 60

Calibration Carried Out by: Kane Church
[PRINT NAME]

Signed & Certified: _____ **Calibration Date:** 18.2.2019
[DD/MM/YYYY]

Atma *Environmental*

EQUIPMENT CALIBRATION LOG

Instrument Type: MiniRAE 3000 PID

Model Number: PGM-7320
Serial Number: 592-903636

Calibration Method: Direct Connection to Isobutylene with flow valve

Calibration Gas Flow Rate: 0.5 L/min

Equipment Report:

Calibration	Actual Value (ppm)	Reading (ppm)	PASSED? (Y/N)
Zero – Fresh Air	0	0	Y
Span – Isobutylene	100	101.0	Y

Calibration Gas Composition:

Components	Concentration	Molecular Formula
Isobutylene	100 ppm *	i-C_4H_8
Air	Balance	Air

* +/- 2% accuracy relative.

Gas Prepared by: Calgaz – Division of Air Liquide Advanced Technologies U.S., LLC

Lot Number: 1767154 Cyl 60

Calibration Carried Out by: Henry Baxter
[PRINT NAME]

Signed & Certified: _____ **Calibration Date:** 21/03/19
[DD/MM/YYYY]

Moorabbin, Victoria
March 2019 Daily Weather Observations

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Fr	22.5	39.2	0			NNW	41	11:06	27.2	40	7	N	6	1020.2	38.1	16		NNW	13	1017.9
2	Sa	21.7	37.4	0			N	48	10:00	28.3	35		N	28	1019.4	35.5	22		N	30	1016.6
3	Su	24.4	37.6	0			NNW	52	11:57	28.2	33		N	30	1017.8	36.5	18	8	NW	24	1015.6
4	Mo	18.9	27.4	0			S	35	17:02	20.3	69	8	NNE	2	1019.6	23.8	58		SW	19	1016.9
5	Tu	17.1	24.0	0			SSW	31	17:06	19.6	75	6	ESE	7	1013.0	21.7	60	5	SSW	17	1008.4
6	We	13.8	18.1	1.4			WSW	59	12:50	14.5	61	8	W	28	1013.4	15.5	57	2	W	20	1017.4
7	Th	11.0	21.8	1.0			WSW	31	00:51	12.6	57		N	17	1024.9	19.2	47		SSW	17	1021.2
8	Fr	12.3	27.6	0			NNW	39	10:58	19.1	29	8	N	20	1017.7	25.5	17	6	NNW	13	1016.1
9	Sa	12.4	25.1	0			SSW	28	13:41	16.9	61	4	N	6	1018.5	23.1	52	7	SW	22	1016.8
10	Su	14.1	25.2	0			WSW	50	12:39	18.0	86	3	N	9	1011.7	19.6	67	8	N	28	1008.7
11	Mo	17.6	21.8	0			SW	35	13:53	19.5	72	8	WNW	13	1011.0	20.4	67	8	WSW	28	1009.3
12	Tu	15.5	19.0	0			SW	52	10:25	16.7	63	8	WNW	24	1009.1	18.3	44	8	SW	30	1013.1
13	We	12.0	19.0	1.0			S	35	15:53	15.7	56	8	ESE	9	1018.7	18.3	50	3	SSW	24	1018.2
14	Th	9.9	21.7	0			SW	39	15:07	15.0	73		SE	9	1016.9	20.1	56		SW	26	1015.6
15	Fr	9.4	23.9	0			SW	48	15:03	15.0	81	7	ESE	7	1019.7	22.2	48		SSE	20	1018.8
16	Sa	10.8	29.1	0			ESE	37	19:17	14.8	87		N	6	1020.9	27.7	35		S	17	1018.4
17	Su	13.3	25.7	0			ESE	26	23:03	18.0	90	1	NNW	13	1019.3	24.1	63		SSW	11	1016.4
18	Mo	14.6	28.1	0			ESE	52	17:04	18.6	84	7	SE	20	1018.0	26.8	51	1	ESE	33	1015.1
19	Tu	18.3	26.3	0			ESE	48	23:52	19.8	79	8	SSE	13	1016.4	25.1	63	7	S	20	1014.2
20	We	19.1	24.0	0			SW	28	14:49	20.0	87	8	S	7	1015.4	23.0	72	5	WSW	15	1014.5
21	Th	17.1	25.7	0			SW	24	15:21	19.9	86	8	SE	9	1016.1	25.0	60		SSW	13	1014.9
22	Fr	17.6	31.5	0			NE	56	17:54	19.4	87	8	NNE	9	1015.3	26.6	61		SSW	19	1012.0
23	Sa	17.7	32.1	0.2			SW	59	16:38	20.4	77	8	NE	11	1009.3	30.9	34	1	NNW	35	1004.2
24	Su	15.8	31.0	0.4			N	69	21:20	19.9	75	1	NNE	9	1011.0	30.4	33		N	35	1003.6
25	Mo	14.9	18.2	6.2			W	65	12:31	15.1	53	8	WNW	31	1005.0	15.6	47	5	W	33	1009.0
26	Tu	12.1	19.7	0			WNW	48	02:22	13.6	61	8	WNW	15	1017.8	18.3	48	1	WSW	15	1020.2
27	We	13.4	21.1	0			SE	28	18:05	13.9	66	8	NNW	9	1024.5	19.2	53		SW	17	1021.7
28	Th	11.1	28.6	0			N	43	15:47	17.4	54		N	9	1017.9	27.3	21		NNW	22	1013.0
29	Fr	16.7	29.1	0			W	69	16:05	21.3	31	1	WNW	7	1006.1	26.9	19	8	NW	30	1000.1
30	Sa	10.4	15.9	1.4			SW	59	12:01	10.8	78	8	W	28	1008.8	15.2	46	4	WSW	31	1009.3
31	Su	10.2	18.0	6.2			W	41	12:04	14.0	81	8	WNW	20	1014.7	15.5	89	7	SW	17	1017.3
Statistics for March 2019																					
	Mean	15.0	25.6							18.2	66	6		13	1015.7	23.7	47	5		22	1014.0
	Lowest	9.4	15.9							10.8	29	1	NNE	2	1005.0	15.2	16	1	SSW	11	1000.1
	Highest	24.4	39.2	6.2			#	69		28.3	90	8	WNW	31	1024.9	38.1	89	8	#	35	1021.7
	Total			17.8																	

Observations were drawn from Moorabbin Airport {station 086077}

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Moorabbin, Victoria
April 2019 Daily Weather Observations

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Mo	12.3	17.0	2.8			SW	22	13:06	13.5	76	8	N	4	1025.4	16.4	54	8	SSW	11	1025.3
2	Tu	5.5	26.3	0			N	46	13:44	11.0	91		N	11	1026.9	25.4	31		N	26	1022.2
3	We	11.0	24.4	0			SW	37	10:08	19.3	53		N	20	1023.9	20.0	72	2	SW	20	1026.3
4	Th	11.3	23.7	0			SE	24	23:28	12.3	78	1		Calm	1030.3	23.1	50	6	E	9	1027.3
5	Fr	11.9	29.8	0			N	63	22:23	19.2	67		NNE	17	1024.3	28.5	33		N	33	1017.8
6	Sa	16.8	20.1	0			N	63	00:19	16.9	74	8	W	19	1019.3	19.4	52	5	SW	15	1019.2
7	Su	8.4	26.5	0			NW	46	12:14	16.7	61		N	20	1017.2	22.7	47		SW	17	1011.6
8	Mo	12.0	23.5	0			NNW	48	14:14	16.9	61		NNW	17	1013.9	21.4	45	1	WNW	26	1010.5
9	Tu	12.0	16.5	3.6			SW	50	11:26	13.6	65	2	W	20	1017.8	14.6	57	5	WSW	26	1020.1
10	We	10.6	16.4	4.0			SW	39	00:21	13.4	72	8	ENE	7	1027.2	15.5	55	7	SSW	17	1026.4
11	Th	11.4	17.6	0			SSW	31	15:04	15.3	56	6	ENE	11	1027.6	17.0	53		SSW	22	1025.4
12	Fr	5.7	23.4	0			SW	24	13:32	12.8	74		N	9	1024.8	21.7	33		SSW	17	1020.6
13	Sa	8.7	20.1	0			SSW	30	16:13	13.5	69	8	NNE	2	1025.6	18.7	63	7	SW	19	1023.9
14	Su	10.0	22.5	0			ESE	33	19:57	14.5	99		NE	11	1025.2	21.5	54		SW	17	1020.8
15	Mo	12.5	27.8	0			NNE	28	11:50	17.7	70	8	E	6	1021.7	27.5	35	3	ENE	13	1017.8
16	Tu	16.9	31.8	0			NNE	46	10:06	24.2	41		N	22	1020.9	31.0	17		N	28	1017.7
17	We	22.3		0						25.7	33		N	39	1017.6						
Statistics for the first 17 days of April 2019																					
	Mean	11.7	23.0							16.3	67	6		13	1022.9	21.5	46	4		19	1020.8
	Lowest	5.5	16.4							11.0	33	1		Calm	1013.9	14.6	17	1	E	9	1010.5
	Highest	22.3	31.8	4.0			N	63		25.7	99	8	N	39	1030.3	31.0	72	8	N	33	1027.3
	Total			10.4																	

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APPENDIX D

Supplementary Reports

ENVIRONMENTAL DUE DILIGENCE ASSESSMENT

SANDRINGHAM GOLF DRIVING RANGE

20 WANGARA ROAD

SANDRINGHAM VIC 3191

Prepared for Bayside City Council

76 Royal Avenue

SANDRINGHAM VIC 3191

Report Date: 24 July 2017

Report Number: RM406-M.1

Prepared/Submitted by:

Emmanuel Ernest

Senior Environmental Scientist

MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164 Australia
Street Address: Suite 23, 160 South Gippsland Highway VIC 3164
T (+61) (3) 9554 3258 F (+61) (3) 9705 7948
e-mail: geoaquitards@iprimus.com.au

24 July 2017 Our Reference: RM406-M.1

Bayside City Council
76 Royal Avenue
SANDRINGHAM VIC 3191

Attention: Abraham Albatat

Dear Abraham

RE: ENVIRONMENTAL DUE DILIGENCE ASSESSMENT AT SANDRINGHAM GOLF DRIVING RANGE (20 WANGARA ROAD, SANDRINGHAM)

Geoaquitards Environmental has conducted Environmental Due Diligence Assessment for Sandringham Golf Driving Range (20 Wangara Road, Sandringham). This assessment has been undertaken as part of your correspondence received on 29 June 2017. The report and associated attachments are presented in this document.

Please do not hesitate to contact the undersigned if you require further information.

Prepared / Submitted by

GEOAQUITARDS ENVIRONMENTAL



Emmanuel Ernest

Senior Environmental Scientist

MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164 Australia
Street Address: Suite 23, 160 South Gippsaland Highway VIC 3164
T (+61) (3) 9554 3258 F (+61) (3) 9705 7948
e-mail: geoaquitards@iprimus.com.au

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No. Of copies	Report File Name	Report Status	Date	Prepared for:	Initials
1	RM406-M.1	Final	24 July 2017	Bayside City Council	EE

1 INTRODUCTION

This report details the findings of Environmental Due Diligence Assessment for Sandringham Driving Range, 20 Wangara Road Sandringham ('the site') conducted by Geoaquitards Environmental for Bayside City Council, Abraham Albatat commissioned the work, by email on 29 June 2017.

2 BACKGROUND

During February 2017 Geoaquitards Environmental was requested by Bayside City Council to undertake Limited Targeted Classification of Wastes Report to provide an indication of the level of contamination from targeted eleven (11) targeted test locations at the site.

During the first round of soil sampling programme forty-six (46) soil samples were retrieved from eleven (11) test locations (on 27 February 2017) and submitted to Eurofins | mgt for laboratory analysis for classification of wastes.

This investigation was intended to identify areas of potential environmental concern at eleven (11) test locations at the site. The numbers of samples analysed were six (6) samples for Vic EPA IWRG 621 and eighteen (18) samples various depths to a maximum depth of 4.0m for IWRG 621 Metals (Metals M12) to provide an indication of contamination eleven (11) test locations.

Test results were compared with NEPM HIL "C", EIL Urban Residence/Public Open Space criteria and also clean fill criteria as set out in EPA Information Bulletin, Publication IWRG621, June 2009 *Soil Hazard Categorisation and Management,* Industrial Waste Resource Guidelines and samples reported concentrations above the cleanfill criteria for zinc (at test location 10 at 0.15m, 11 at 0.15m, and 11 at 1.0m), mercury (at test location 6 at 1.0m) and pH (1 at 1.50m and 2 at 1.0m)

Bayside City Council requested Geoaquitards Environmental in July 2017 to undertake further Environmental Due Diligence Assessment to cover the entire site and this Environmental Due Diligence Assessment details the combined information from round 1 and 2 soil sampling works.

3 OBJECTIVE AND WORK ELEMENTS

Objectives and work elements undertaken as part of this report is as follows:

3.1 Objective

The principal objective was to undertake Environmental Due Diligence Assessment of the entire site and to provide an indication of contamination levels at the site and to consider any further works and legal obligation that may be required to consider the site for any other beneficial uses.

3.2 Work Elements

The following work elements were undertaken as part of Environmental Due Assessment:

3.2.1 Soil Investigation

Soil investigation involved drilling, soil sampling, laboratory analysis, data compilation and reporting and details are as follows:

- Identify any on-site environmental impacts (such as adverse impacts on plants);
- Identify any aesthetic effects (such as staining of surface soil, soil vapour, landfill gas and odour);
- Soil sampling program to address potential contaminants of concern from potential source of contamination;
- Laboratory analysis of selected samples for potential contaminants of concerns;
- Comparison of the laboratory analytical results for the soil samples with NEPM HILs A, EIL urban residence/public open space, HSL A/B low-high density residential, Canadian CCME SQC for residential/parkland use, lowest available US EPA ECO-SSL, and HSL B for direct contact (CRC Care) Technical Report No 10; and
- Report any additional works and legal obligations that may be required to deal with these environmental impacts.

  Note: A full Stage one Primary Site Investigation was not undertaken however brief historical information is provided in this report as this was necessary to consider any development at the site (i.e. landfill activities).

4 SITE DESCRIPTION

4.1 Site Information

The subject land is located on the south side of the Wangara Road and east side of the George Street in Sandringham. The summary of site information is as follows:

TABLE 1 – SITE INFORMATION

Site Information	
Site Address	20 Wangara Road Sandringham 3191
Council Property Number	854166
Standard Parcel Identifier (SPI)	1\PS727384 and 2054\PP3163
Lot and Plan Number	Lot 1 PS727384 and Parish of Moorabbin Allot. 2054
Certificate of Title	Vol. 09965 Fol 822
Current site owner	Bayside City Council (Who is leasing it out to a private leasee)
Local government	Bayside City Council
Melway Reference	77 C11
Planning zone	Public Park And Recreation Zone (PPRZ) Schedule To The Public Park And Recreation Zone
Overlays	Design And Development Overlay (DDO) Design And Development Overlay – Schedule 2 (DDO2)
Site area	6.6 hectares
Current Use	Golf Driving Range/Golf Academy
Proposed Use	The site is under consideration for construction of number of netball courts.

4.2 Site Walkover

Geoaquitards Environmental representative visited the site on 3 July 2017 to conduct a preliminary site walkover survey.

The site is located approximately 17 kilometres to the south-east of the Melbourne CBD and approximately 2.14 kilometres north-west of the Cheltenham Railway station. The site measure approximately 6.6 Hectares and located on the corner of the Wangara Road and George Street and the site is basically rectangular in shape with a frontage to Wangara Road.

Surrounding land uses are generally industrial/business, residential, educational (Schools) and new Cheltenham Cemetery/Cheltenham Memorial Park is located east of the site.

Refer to Appendix A for Site Location Map and for Site Aerial Views.

4.3 Site Condition

Site inspection was carried out by a Geoaquitards Environmental Scientist on 3 July 2017 (Refer to Appendix A for Site Location Map and for Site Aerial Views). The site description is as follows:

TABLE 2 – SITE CONDITION

Site visit dates	Description
3 July 2017	- The site covers an area of approximately 6.6 Hectares and is generally grass covered. - The site is currently been used as Golf Driving Range and as a Golf Academy. - The main site entry is from Wangara Road. - Golf Club House and a brick building are located north of the site. - A car park is located one the north-west of the site covered by concrete or gravel. - Medium to large trees are located on the northern, southern, eastern and western boundaries of the site and no discolouration of leaves or foliation was noticed. - Most of the site filled, undulating and south of the site is raised from the ground level to approximately 7-10m from the road surface level. - Numbers of shipping containers were seen east of the site.

4.4 Surrounding Land Uses

The site surrounding information is described in Table 3.

TABLE 3 – SITE SURROUNDING INFORMATION

Direction	Comments
South	- Commercial developments are located south and south-east of the site. - Sandringham Golf Course is located further south of the site. - Residential developments are seen far south of the site.
North	- Commercial developments are located immediate north and north-east of the site. - Residential developments are seen far north and north-east of the site.
East	- Cheltenham Memorial Park/Cemetery is located immediate east of the site. - Commercial developments are located further east of the site. - Residential developments are seen far east of the site.
West	- Residential developments are located west of the site. - Sandringham College north-west of the site.

5 GEOLOGY

The geology of the site as mapped on Department of Economic Development, Jobs, Transport and Resources, Geological units represented as two dimensional polygons (1:250,000) produced by the Geological Survey of Victoria indicates that the site is located on the following two different geological units (Refer to Table 4 and Table 5 for Geological Desktop Search Information and for Figure 1 for Geological Map):

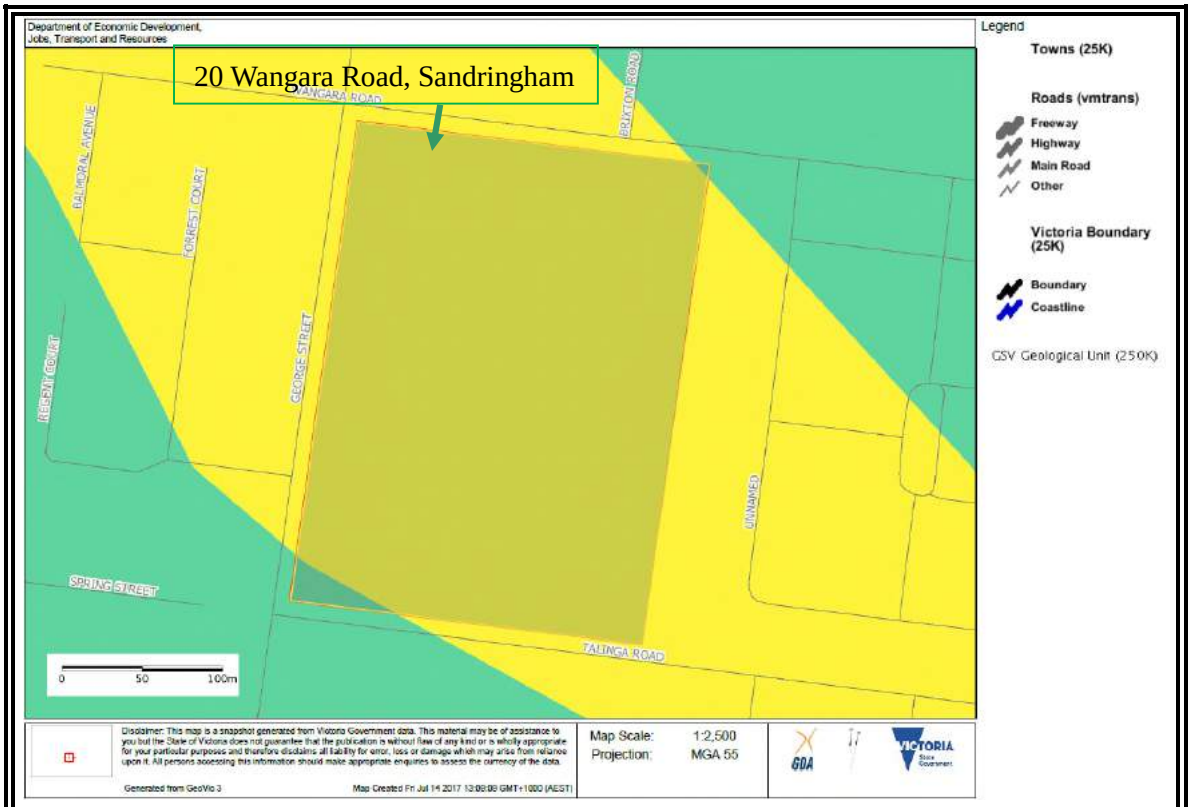
TABLE 4 - GEOLOGICAL DESKTOP SEARCH INFORMATION TO THE EAST OF THE SITE

Geological Polygons 250K	
Name:	Red Bluff Sandstone (Nbr): generic
Description	Sandstone, conglomerate: pale yellow and brown; fine to coarse-grained, massive to well bedded; cross-bedded; local ironstone
Geologic Unit Type	Lithostratigraphic
Rank	Formation [lithostratigraphic]
Lithology:	sandstone (significant); conglomerate (significant)
Geologic History	Miocene to Pliocene (channelled stream flow - fluvial [environment])
Generic Symboliser:	Nbr
GML_Id:	gsmlp.geologicunitview.250k-10006630

TABLE 5 - GEOLOGICAL DESKTOP SEARCH INFORMATION TO THE NORTH-EAST AND SOUTH-WEST OF THE SITE

Geological Polygons 250K	
Name:	inland dune deposits (Qd1): generic
Description	Sand, silt, clay: friable to consolidated; well sorted; includes both lunette deposits and deposits of longitudinal dunes
Geologic Unit Type	informal
Rank	informal Formation [lithostratigraphic]
Lithology:	silt [material] (significant); sand (significant); clay [lithology] (significant)
Geologic History	Quaternary to Quaternary (aeolian [process] - aeolian [environment])
Generic Symboliser:	Qd1
GML_Id:	gsmlp.geologicunitview.250k-10021003

FIGURE 1 - GEOLOGICAL MAP



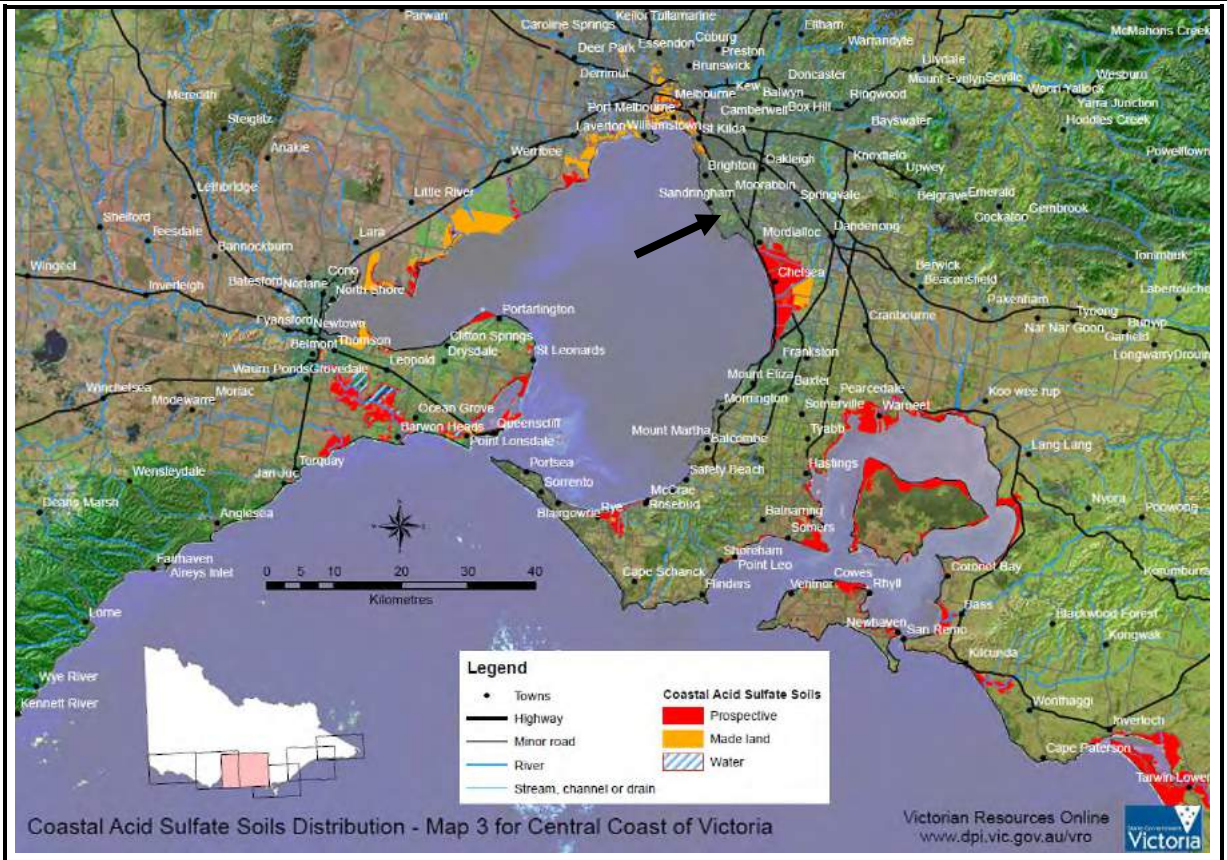
Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	Figure	Geological Map
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Project	Environmental Due Diligence
Date	14 July 2017		

6 REVIEW OF ACID SULFATE SOIL (ASS) HAZARD MAP

As part of the site history a review of Coastal Acid Sulfate Soil Maps were undertaken 14 July 2017 (Ref: Victorian Coastal Acid Sulfate Soil Strategy, Published by the Victorian Government Department of Sustainability and Environment, Melbourne 2009). The results indicated that Sandringham Golf Driving Range (20 Wangara Road, Sandringham) is not included as prospective land that has the potential to contain Coastal Acid Sulfate Soil. Referenced Map 3 of Central Coast shown below.

FIGURE 2 - ACID SULFATE SOIL (ASS) HAZARD MAP



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	Project	Environmental Due Diligence
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Adopted from	Coastal Acid Sulfate Soils Distribution - Map 3 for Central Coast of Victoria, Department of Economic Development, Jobs, Transport and Resources 2010
Date	14 July 2017		

7 TOPOGRAPHY

The topography of the site is undulating. Based on the site contour map extracted from Land Channel – Land.vic.gov.au indicates that the site lies approximately 41.5 to 32.5 meters above sea level and site generally slopes westerly, south-westerly direction, southern direction and south easterly direction with regional topography generally sloping westerly to south-westerly direction (Refer to Appendix M for site and regional contour map).

8 HYDROGEOLOGY

8.1 Anticipated Depth to Watertable

Based on the Visualising Victoria's Groundwater (VVG) online map study the anticipated depth to watertable beneath the site and in the surrounding area is between less than 5 to 10 meters. Refer to Figure 7 for VVG Depth to Watertable Map.

8.2 Anticipated Groundwater Flow Direction

Regional topography sloping gently to the westerly to south-westerly direction which is generally consistent with the direction of the closest natural surface water body the Port Phillip Bay located approximately 1.7km west of the site. Regional groundwater is considered likely to flow west or south west towards Port Phillip Bay.

8.3 Anticipated Groundwater Salinity and Segment

The Visualising Victoria's Groundwater (VVG) online map indicates the aquifer beneath the site is likely to have salinity less than 500 mg/L. The groundwater environment based on the Visualising Victoria's Groundwater (VVG) online map study indicates that the site is suitable for Segment A1 (SEPP). Refer to Figure 6 for VVG Groundwater Salinity Map.

9 SITE HISTORY

9.1 Royal Historical Society of Victoria Inc Information

Geoaquitards Environmental contacted Geraldine Horgan, administrative officer from Royal Historical Society. The site historical activities and the following historical information and the following text were provided by Royal Historical Society of Victoria Inc (Refer to Appendix C):

- The site for review is located on the south east corner of Wangara Road and George Street, Sandringham. The site extends through to Talinga Road which forms the southern boundary.
- The site therefore has a frontage to Wangara Road (north side boundary), George Street (west side boundary) and Talinga Road (south side boundary). The Cheltenham Cemetery abuts the site on the east side.
- In the Sands & McDougall Directories, up until the final edition in 1974, the site under review has been listed as being within the suburb of Cheltenham.
- According to the Sands and McDougall Street Directories, Bay Road (to the north of the site) was constructed in 1876, and this area has been associated with market gardening up until the 1950's.
- Wangara Roads was not listed in the Sands and MacDougall Directories until the

mid-1960s.

- The Cheltenham Memorial Park and Cemetery, adjacent to the site under review, was established in 1933. At that time this section of Wangara Road appears to have been an extension of Holloway Road (located to the west) and known as Holloway Road.
- In the 1935 Sands & McDougall Directory the occupant of the site under review is listed as Ernest Springhall with the Cheltenham Cemetery next listed, on the east side. There is no information as to the use of the subject land.
- In the 1942 directory the occupant is listed as Harry Forrest, then the cemetery.
- In the 1950 and 1955 directories the occupant is listed as William Moore, then the cemetery. In both these years the land directly opposite the site, on the north side of Holloway Road, is listed as W T Grant, Sandpits.
- In the 1960 directory the occupant of the site under review is listed as L J Ayres.
- In the 1965 directory the occupant is still listed as L J Ayres however the street name had changed from “Holloway” to “Wangara”.
- In the 1970 directory the occupant remains as L J Ayres, with the Cheltenham Cemetery adjacent.
- In the 1974 directory (the final edition of the Sands & McDougall Directories) the occupant is listed as L J Ayres however the “City of Sandringham Council Tip” is also listed between L J Ayres and the Cemetery.
- In the 1976 Melways Street Directory the site under review is listed as ‘Wangara Reserve’. In the 1988 Street Directory this had changed to ‘Golf Driving Range’ and this is still the notation over the site in the 2017 Street Directory.

The above research was undertaken by Greg Buchanan from Royal Historical Society of Victoria Inc. The summary of Royal Historical Society of Victoria Inc indicates that site was used as City of Sandringham Council Tip since 1976 to 1976 and in 1976 site was used as Wangara Reserve and since 1988 to present the site is used as Golf Driving Range.

9.2 Priority Sites Register Extract

As part of the site history review a search was conducted through Victoria Environment Protection Authority to ascertain whether the site was registered on the Priority Sites Register.

Priority Sites are sites for which EPA has issued a Clean-up 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 (‘the Act’). Typically these are sites where pollution of land and/or groundwater presents an unacceptable risk to human health or to the environment.

Results of these EPA Priority Sites Register Extract searches conducted on 17 July 2015 through SAI Global Property Division Pty Ltd, found that the site is not listed on the priority site register and also the subject site is not in the vicinity of a sites listed on the priority site register at the date last notified by the EPA. (Refer to Appendix B - EPA Priority Sites Register Extract)

9.3 Title Information

Following title information was provided by Abraham Albatat from the Bayside City Council on 24 July 2017 and copy of the Title information reviewed is provided in Appendix N.

TABLE 6 – SUMMARY OF TITLE INFORMATION

Date	Volume/Folio No.	Proprietor/ Lease/Profession
01/08/1990	**Vol. 09965 Fol. 822** Derived from Vol. 04156 Fol. 189 Vol. 05678 Fol. 536 Vol. 06979 Fol. 743 Vol. 07760 Fol. 066 to Vol. 07760 Fol. 067 Vol. 09749 Fol. 227 Vol. 09933 Fol. 756	The Mayor Councillors and Citizens of the City of Sandringham
10/03/1987	**Caveats**	Golf Driving Range (Sandringham) Pty Ltd

9.4 Historical Information Provided by the Council

Historical information provided by the Darren Sampson from the Bayside City Council on 16 January 2017 indicated that the site was an old tip site and the Pacific Dunlop Battery factory was located to the west of the site. Refer to the historical aerial photographs dated 1970 and 1981 provided by the Council.

Additionally number of Historical Council documents for the subject site was provided by the Abraham Albatat from the Bayside City Council on 18 July 2017.

Summary of these Historical Council documents are as follows;

- A Historical Council document dated 9 December 1985 relating to the site indicated that the Council had leased 4, 800 Sqm of the site to Small Bore Rifle Club in 1981 and was proposed to be used as a Small Bore Rifle Range. In 1982 the club carried out some preliminary earth works; however in 1983 the owners adjoining land, The Cheltenham Cemetery trust advised of their concern regarding the site uses as a Rifle Range and in 1985 the Cemetery Trust advised Council that they object to the proposed Rifle Range and Council had concluded that the proposed site use as a Rifle Range was incompatible and would detrimentally affect the use of the adjoining land for cemetery purposes.
- A Historical Council document dated 26 March 1986 concerning the site indicated that the Council supported an application by Eight Days per Week Pty Ltd to establish a Golf Driving Range on the site as lessee to the Council. Additionally this historical document also indicated that the site was used as a Municipal Garbage Tip until 1968 and was reserved for Public Open Space.
- Borehole logs undertaken by D. Sutchcuffe in April 1985 at the site indicated that site contained Loamy/Sandy Loam/Sandy topsoil up to 600mm and FILL material containing broken bottles, metals, plastic bags, soil, concrete, bluestone and old shoes up to 1,800mm.

Following additional Historical information in relation to the site was provided by the Abraham Albatat from the Bayside City Council on 24 July 2017.

- In 1985, Bruce Green identified a need for a golf practice facility in the Bayside area and came upon the disused tip area in Holloway Rd (now Wangara Rd).

- The 15 acre site was totally overgrown and littered with car bodies, rocks, massive overgrowth and the occasional tree.
- About six months later the, then, Sandringham Council advertised for expressions of Interest for the site to be developed far purposes including a golf practice range. The Council required all development costs to be borne by the successful tenderer.
- Bruce formed a syndicate comprising himself, Head Professional of Royal Melbourne Golf Club, Barry Flynn a marketing expert, Peter Williams the Course Superintendent at the Royal Melbourne Golf Club, and local businessman Stan Lenepvue, who together with Bruce's mother Iris Green financed the project.
- Initial funds of $320,000 were invested in 1986 building driving bays and office facilities, totally levelling the site, growing grass and planting some 800 indigenous trees.
- Over the ensuing years, the facility grew in popularity and in 1994 was further developed by constructing a mini golf facility and upgrading the ball dispensing area. The total cost was $277,210.
- In late 1999, the Dunlop factory in George Street closed down and the site was sold for housing. Safety Issues with the new housing forced the dismantling of the existing practice bays to re-align them. The opportunity was taken to construct covered 'Driving Bays and substantially upgrade the existing food and beverage dispensing area. A property functioning Café/Restaurant, catering for the disabled, which included wheelchair path and toilet facilities was constructed at a total cost of $1,148,643.
- The total capital investment In the Driving Range since its establishment in 1986 is over $2,000,000.
- The first ever Bayslde Golf Academy was created at the driving range and still operates from there today under the banner of the Sandringham Golf Academy.

Refer to Appendix L for Historical Information Provided by the Council.

9.5 Summary of Site History

Site history search undertaken for the site by Geoaquitards Environmental through Royal Historical Society of Victoria Inc identified that the site was used as a City of Sandringham Council Tip in 1974; however this search does not proved any information regarding the start dates, end dates and the duration of the subject site’s operation as the City of Sandringham Council Tip.

EPA Priority Sites Register Extract searches conducted on 17 July 2015 through SAI Global Property Division Pty Ltd, found that the site is not listed on the priority site register and also the subject site is not in the vicinity of a sites listed on the priority site register at the date last notified by the EPA.

Historical information provided by the Bayside City Council indicated that the site was used as a tip site and the former Pacific Dunlop Battery factory which was located west of the site.

Historical document provide by Council indicated that the subject land was used as a Municipal Garbage Tip until 1968 and was reserved for Public Open Space.

In 1981 the site was proposed to be used as a Small Bore Rifle Range by Small Bore Rifle Club; however Council had concluded that the proposed site use as a Rifle Range was incompatible.

Since 1986 the site has been leased for the use of Golf Driving Range by Eight Days per Week Pty Ltd.

10 PROTECTED BENEFICIAL USES OF LAND

The State Environment Protection Policy (Prevention and Management of Contamination of Land) (Land SEPP) sets out the regulatory framework for the prevention and management of contaminated land within the State of Victoria. The intent of this framework is to maintain and maximise (to the extent practicable) the quality of the land environment in Victoria, in order to protect its existing and potential beneficial uses. The Land SEPP was declared in June 2002 in accordance with Section 16 of the Environment Protection Act 1970. The Environment Protection Authority (EPA) is responsible for its implementation. The Land SEPP identifies specific land use categories as well as a number of protected beneficial uses associated with each of the land use categories.

In accordance with the SEPP protected beneficial uses of land are as follows:

- Maintenance of ecosystems.
- Human health.
- Buildings and structures
- Aesthetics and
- Production of Food, Flora and Fibre

TABLE 7 - PROTECTED BENEFICIAL USES OF LAND*

Beneficial Uses	Land Use						
	Parks & reserves	Agricultural	Sensitive Use		Recreational /Open Space	Commercial	Industrial
			High Density	Other			
Maintenance of Ecosystems							
Natural Ecosystems	✓						
Modified Ecosystems	✓	✓		✓	✓		
Highly Modified Ecosystems		✓	✓	✓	✓	✓	✓
Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of Food, Flora & Fibre	✓	✓		✓			

Note: * The above table is a reproduction from the SEPP Prevention *and Management of Contamination of Land* (June 2002)

10.1 Soil Quality Objectives

Soil quality objectives for the protected beneficial uses of the land are as follows:

TABLE 8 – INDICATORS AND OBJECTIVE FOR BENEFICIAL LAND USES

Beneficial Land Use	Indicators	Objectives
Maintenance of Ecosystems	Chemical substances or waste identified in NEPM Schedule B (2), 2013	Level of indicator must not be greater than the ecological investigation level (EIL), other appropriately derived risk based criteria or levels approved by the EPA
Protection of Human Health	Chemical substances or waste identified in NEPM Schedule B (2), 2013	Level of indicator chemical must not be greater than the health risk-based threshold levels (HIL Criteria) for specified land uses HIL A for this site or other appropriately derived risk based criteria or levels approved by the EPA
Buildings & Structures	pH, sulphate, Redox potential, salinity or any potentially detrimental chemical substance or waste	Contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials*
Aesthetics	Offensive substances - visual or olfactory	Contamination not to cause the land to be offensive to the senses of human beings
Production of Food, Flora and Fibre	Chemical substances or waste identified through the application of the National Environment Protection, 2013 Schedule B2-Guideline on Investigation Levels for Soil and Groundwater	Contamination of land must not: (a) adversely affect produce quality or yield; and (b) affect the level of any indicator in food, flora and fibre produced at the site (or that may be produced) such that the level of that indicator is greater than that specified by the Australia New Zealand Food Authority, Food Standards Code

10.1.1 Maintenance of Ecosystems

The SEPP states that the level of a chemical substance or waste (indicator) must not be greater than any regional Ecological Investigation Level (EIL) developed in accordance with the National Environment Protection (Assessment of Site Contamination) Measure (The NEPM" NEPC, 2013).

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

Ecological investigation levels (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. These include:

- Generic level for aged arsenic (As);
- Generic level for fresh DDT;
- Generic level for fresh naphthalene;
- Added contaminant limit for lead (Pb);
- Added contaminant limit for nickel (Ni) using cation exchange capacity (CEC);
- Added contaminant limit for copper (Cu) using CEC or pH;
- Added contaminant limit for chromium III (Cr III) using %clay;
- Added contaminant limit for aged zinc (Zn) using CEC and pH

NEPM (2013) based EILs for CrIII, Cu, Ni, Pb, Zn are background concentration (inferred from site data based on Olszowy et al. (1995)) + added concentration limit (ACL) based on Average soil pH 7.45, Average CEC 19.5 cmol/kg, and Organic carbon content of 0.8%OC.

In addition to this Ecological screening levels (ESLs) were considered for petroleum hydrocarbons in soil (BTEX, benzo (a) pyrene, TPH). ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2m of soil and are applicable for assessing risk to terrestrial ecosystems.

EILs and ESLs have been developed for three generic land use settings. Generic land uses and the protection levels for the generic land use settings are as follows.

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

EILs and ESLs for urban residential areas and public open space have been adopted for the site. For analytes where there are no EILs published in the NEPM 2013 following criteria have been adopted for the site.

- ANZECC (1992) Environmental Investigation Levels;
- USEPA Ecological Soil Screening Levels (as amended from time to time);
- Canadian CCME SQC for Residential/Parkland Land Use; and
- The upper limit for fill material for selenium from EPA Publication IWRG621.

10.1.2 Human health

The investigation level specified for human health in the NEPM (NEPC, 2013). Schedule A (1) of the NEPM (NEPC, 2013) provides a range of investigation levels for the protection of human health, referred to as Health-based Investigation Levels (HILs).

HILs are provided for following exposure settings based on land use:

- **HIL A:** residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools);

- **HIL B:** residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats;
- **HIL C:** public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate; and
- **HIL D:** commercial/industrial such as shops, offices, factories and industrial sites.

The exposure setting HIL A is adopted for the unrestricted land uses and HIL B is adopted for the residential land use with minimal opportunities for soil access.

NEPM HILs are not intended for use as default remediation trigger criteria, but are intended to prompt an appropriate site-specific assessment of risk when they are exceeded. This is consistent with Table 2 of the SEPP (PMCL), which allows for objectives derived using a risk-based methodology to be adopted in place of HILs.

For chemicals for which HILs are not specified in the NEPM, screening levels published by the alternative national and/or international sources and Health Screening Levels (HSLs) derived by Friebel and Nadebaum (2011) were adopted for the site.

The values adopted were the lowest of those derived for vapour intrusion and direct contact pathways for the relevant land use(s). The screening levels for vapour intrusion are derived for a range of soil types and contamination source depths.

Where relevant the most conservative of the derived values (those derived for sand lithology and with contamination at depths of 0 to <1 m depth) were adopted.

The HSLs for BTEX and naphthalene (which are not saturation or solubility limited) are considered appropriate for use at sites where the source of contamination includes petroleum and/or non-petroleum based activities (e.g. coal gas manufacture).

The HSLs for TPH fractions have been derived for typical petroleum mixtures (petrol and diesel) and therefore considered appropriate for the assessment of petroleum contamination. Based on the source of TPH at the site, application of the TPH HSLs to the site are considered appropriate. Assessment of soil contamination has also been based on other indicator/target compounds associated with the source of contamination (e.g. PAHs and BTEX).

10.1.3 Buildings and structures

The SEPP states "Contamination must not cause the land to be corrosive to or adverse effect the Integrity of structures or building materials".

Relevant indicators are stated by the SEPP to be "pH, sulphate, redox potential, salinity or any chemical substance or waste that may have a detrimental impact on the structural integrity of buildings or other structures."

Objectives for these key indicators have primarily been sourced from Australian Standard 2159-2009 Piling Design and Installation, in which levels of pH, chloride and sulphate which are considered to represent mild and/or non-aggressive conditions for concrete or steel piles are specified. The values adopted for initial screening (<1,666.67 mg/kg sulphate as S, pH >5.5 and <5,000 mg/kg chloride) are the most conservative of those reported in AS2159 for concrete and steel piles, and are considered to be associated with mild or non-aggressive conditions only where all objectives are met.

The potential for organic compounds (e.g. solvents or petroleum hydrocarbons) to corrode or

adversely impact (e.g. permeate) non-metal underground services should also be considered, particularly where saturated concentrations or free phase product are in contact with buildings and/or structures.

10.1.4 Aesthetics

Currently there are no concentration based aesthetic criteria for soil and SEPP states "Contamination must not cause the land to be offensive to the senses of human beings". Aesthetic observations are subjective, it is considered that if there is discolouration, noticeable odour from the soil on the site or if there are obvious component of waste, such as rubble or similar, then there is a potential aesthetic concern.

10.1.5 Production of Food, Flora and Fibre

The SEPP states contamination of land must not adversely affect produce quality or yield and affect the level of any indicator in food, flora and fibre produced at the site (or what may be produced) such that the level of that indicator is greater than the specified by *Australia New Zealand Food Authority Food Standard Code*. The NEPM EILs/ESLs criteria's are adopted to assess the SEPP protected beneficial uses of land - Production of Food, Flora and Fibre.

11 CONCEPTUAL SITE MODEL

The purpose of a Conceptual Site Model (CSM) is to identify potential risks present at the site relative to the surrounding environment. The potential sources, transport mechanisms and exposure pathways, and potential sensitive receptors in close proximity to the subject property—based on the findings of this investigation and previous investigations—are presented in the sections below.

11.1 Potential Source for Contamination

Potential source for contamination is from the former Garbage Tip activities and from the former Pacific Dunlop Battery factory located west of the site.

11.1.1 Potential Source for Contamination

Based on the limited desktop study and preliminary historical search carried out for the site the following summary of potential source of contamination was identified:

TABLE 9 - SUMMARY OF POTENTIAL SOURCE OF CONTAMINATION

Contamination Source	Potential Contaminants
Importation of contaminated fill and landfill activities	Miscellaneous- TRH/PAH/ OCP/PCB/Vinyl Chloride/Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn)/Cr6+/CN/Total Fluoride/pH, Alkanes and ammonia, sulphides, heavy metals, organic acids
Former Pacific Dunlop Battery factory	Lead, manganese, zinc, cadmium, nickel, cobalt, mercury, silver, antimony

11.2 Potential Receptors

11.2.1 Potential Off-site Receptors

Potential off-site receptors in the surrounding area are as follows:

- The nearest off-site receptors are residents of the neighbouring properties located west of the site;
- People walking in commercial sites located to the north and south of the site; and
- People playing in Sandringham Golf Course and other nearby parks.

11.2.2 Potential On-site Receptors

Based on the current and proposed site uses the following human and ecological receptors have been identified:

- Maintenance and construction workers; and
- People playing and walking in Golf Driving Range.

In addition, following ecological receptors has been identified:

- Plants and animals associated with areas of open, accessible soil.

11.3 Potential Transport Mechanisms and Exposure Pathways

The chemicals of concerns can potentially be transported and the receptors can be exposed via the following:

- Groundwater migration;
- Dermal contact and ingestion of contaminated groundwater;
- Extraction of groundwater;
- Dust inhalation;
- Ingestion of contaminated soil; and
- Vapour migration/inhalation of vapours.

12 SOIL ASSESSMENT

12.1 Soil Assessment Scope of Works

As part of the soil assessment at the subject site following works were undertaken:

- Site inspection prior to field works proceeding, to assess accessibility and possible sampling locations;
- All soil samples retrieved during all rounds of soil sampling works were submitted to a NATA accredited laboratory for analysis (primary samples- were analysed by Eurofin MGT and secondary samples were analysed by ALS Environmental).
- All samples were tested for field PID.
- Analysis of soil samples for a range of analytes (Refer to section 12.5), with selected analysis at various locations.
- Preparation of a report detailing the findings of the investigation works.

Soil Assessment details for Initial Detailed Site Investigations Soil Assessment, Validation Soil Assessment, Additional Soil Sampling Works and Groundwater Bore Installation Soil Assessment are as follows:

12.1.1 Soil Assessment for Initial Detailed Site Investigations

As a part of Initial Detailed Site investigations the following scope of works were undertaken for the first stage of soil assessment:

- Site inspection prior to field works proceeding, to assess accessibility and possible sampling locations.
- Soil samples were generally collected at 0.15 m, 0.50 m, 1.00 m, 1.50 m, 2.00 m, 2.50m and 3.0m below the ground surface.
- Sampling locations and number of sampling undertaken for the site are as follows, (Refer to Appendix J for soil sampling test locations):

TABLE 10 – SAMPLING LOCATIONS AND NUMBER OF SAMPLING UNDERTAKEN AT THE SITE

Sampling Date	Sampling Type	Sampling Works	Sampling Locations	Number of Locations
27 February 2017	Soil Bore	Grid Sampling Locations	Location 1 to 11	11
3 July 2017	Soil Bore	Grid Sampling Locations	Location 12 to 85	74
Total Number of test locations				**85**

- Analysis of primary samples by Eurofins | mgt and secondary sample by ALS Environmental.
- Analysis of soil samples for a range of analytes (Refer to section 12.5), with selected analysis at various locations.
- Preparation of a report detailing the findings of the investigation works.

12.2 Adopted Criteria

The adopted soil criteria for the relevant beneficial uses of land at the site are shown in Table 11 below:

TABLE 11 – ADOPTED SOIL ASSESSMENT CRITERIA

Contaminant	EIL[I]	ESL[I]		HIL C[L]	HSL C[M]											
		Coarse Soil Texture	Fine Soil Texture		SAND	0m to <1m	1m to <2m	2m to <4m	SILT	0m to <1m	1m to <2m	2m to <4m	CLAY	0m to <1m	1m to <2m	2m to <4m
BTEX																
Benzene	-	50	65	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
Ethylbenzene	-	70	125	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
Toluene	-	85	105	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
Xylenes - Total	-	105	45	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
Heavy Metals																
Arsenic	100	-	-	300		-	-	-		-	-	-		-	-	-
Barium	330[B]	-	-	15000[W]		-	-	-		-	-	-		-	-	-
Beryllium	21[B]	-	-	90		-	-	-		-	-	-		-	-	-
Boron	-	-	-	20000		-	-	-		-	-	-		-	-	-
Cadmium	10[A]	-	-	90		-	-	-		-	-	-		-	-	-
Chromium	410[C]	-	-			-	-	-		-	-	-		-	-	-
Cobalt	120[B]	-	-	300		-	-	-		-	-	-		-	-	-
Copper	220[D]	-	-	17000		-	-	-		-	-	-		-	-	-
Lead	1100	-	-	600		-	-	-		-	-	-		-	-	-
Manganese	500[U]	-	-	19000		-	-	-		-	-	-		-	-	-
Methyl Mercury	-	-	-	13		-	-	-		-	-	-		-	-	-
Mercury (inorganic)	6.6[A]	-	-	80		-	-	-		-	-	-		-	-	-

Contaminant	EIL[I]	ESL[I]		HIL C[L]	HSL C[M]											
		Coarse Soil Texture	Fine Soil Texture		SAND	0m to <1m	1m to <2m	2m to <4m	SILT	0m to <1m	1m to <2m	2m to <4m	CLAY	0m to <1m	1m to <2m	2m to <4m
Nickel	270[F]	-	-	1200		-	-	-		-	-	-		-	-	-
Selenium	10[V]	-	-	700		-	-	-		-	-	-		-	-	-
Vanadium	280[B]	-	-	390[W]		-	-	-		-	-	-		-	-	-
Tin	50[U]	-	-	-		-	-	-		-	-	-		-	-	-
Chromium (hexavalent)	130[B]	-	-	300		-	-	-		-	-	-		-	-	-
Cyanide (free)	-	-	-	240		-	-	-		-	-	-		-	-	-
Zinc	730[E]	-	-	30000		-	-	-		-	-	-		-	-	-
Fluoride	450[V]	-	-	3100[W]		-	-	-		-	-	-		-	-	-
Organochlorine Pesticides																
DDT+DDE+DDD	-	-	-	400		-	-	-		-	-	-		-	-	-
Aldrin and Dieldrin	-	4[T]	4[T]	10		-	-	-		-	-	-		-	-	-
DDT	180[V]	-	-	-		-	-	-		-	-	-		-	-	-
Chlordanes	-	-	-	70		-	-	-		-	-	-		-	-	-
Endosulfan	-	-	-	340		-	-	-		-	-	-		-	-	-
Endrin	-	-	-	20		-	-	-		-	-	-		-	-	-
Heptachlor	-	-	-	10		-	-	-		-	-	-		-	-	-
Hexachlorobenzene (HCB)	-	-	-	10		-	-	-		-	-	-		-	-	-
Mirex	-	-	-	20		-	-	-		-	-	-		-	-	-

Contaminant	EIL[I]	ESL[I]		HIL C[L]	HSL C[M]											
		Coarse Soil Texture	Fine Soil Texture		SAND	0m to <1m	1m to <2m	2m to <4m	SILT	0m to <1m	1m to <2m	2m to <4m	CLAY	0m to <1m	1m to <2m	2m to <4m
Toxaphene	-	-	-	30		-	-	-		-	-	-		-	-	-
Methoxychlor	-	-	-	400		-	-	-		-	-	-		-	-	-
Phenols																
2.4.5-Trichlorophenol	-	-	-	800		-	-	-		-	-	-		-	-	-
2.4-Dichlorophenol	-	-	-	1300		-	-	-		-	-	-		-	-	-
Pentachlorophenol	-	-	-	120		-	-	-		-	-	-		-	-	-
Cresols	-	-	-	4000		-	-	-		-	-	-		-	-	-
Phenol	3.8[A]	-	-	40000		-	-	-		-	-	-		-	-	-
PAH																
Benzo(a)pyrene	-	0.7	0.7	-		-	-	-		-	-	-		-	-	-
Benzo(a)pyrene TEQ (lower bound)*	-	-	-	3		-	-	-		-	-	-		-	-	-
Total PAH	18[B]	-	-	300		-	-	-		-	-	-		-	-	-
Total Recoverable Hydrocarbons																
Naphthalene	170	-	-	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
TRH >C10-C16	-	-	-	3800[H]												
TRH >C10-C16 less Naphthalene (F2)	-	120	120	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
TRH >C16-C34	-	300	1300	5300[H]		-	-	-		-	-	-		-	-	-

Contaminant	EIL[I]	ESL[I]		HIL C[L]	HSL C[M]											
		Coarse Soil Texture	Fine Soil Texture		SAND	0m to <1m	1m to <2m	2m to <4m	SILT	0m to <1m	1m to <2m	2m to <4m	CLAY	0m to <1m	1m to <2m	2m to <4m
TRH >C34-C40	-	2800	5600	7400[H]		-	-	-		-	-	-		-	-	-
TRH C6-C10	-	-	-	5100[H]		-	-	-		-	-	-		-	-	-
TRH C6-C10 less BTEX (F1)	-	180	180	-		NL	NL	NL		NL	NL	NL		NL	NL	NL
Volatile Organics																
1.1.1-Trichloroethane	5[A]	-	-	-		-	-	-		-	-	-		-	-	-
Trichloroethene (TCE)	0.01[A]	-	-	-		-	-	-		-	-	-		-	-	-
Total PCB	1.3[A]	-	-	1		-	-	-		-	-	-		-	-	-

Note:

A - Canadian CCME SQC for Residential/Parkland Land Use
B - US EPA Eco-SSL
C - EIL Calculated based on Clay content of 14.65%
D - EIL Calculated based on soil pH 7.45, CEC of 19.5 cmol/kg and Organic carbon content of 0.8%OC
E - EIL Calculated based on soil pH 7.45, CEC of 19.5 cmol/kg
F - EIL Calculated based on CEC of 19.5 cmol/kg
H - Soil Health Screening Levels for direct contact (CRC Care) Table 4 - Technical Report No.10
I - Urban Residential/Public Open Space
L. HIL C - Public open space such as parks, playground, playing fields, secondary schools and footpath
M - HSL C - Public open space such as parks, playground, playing fields, secondary schools and footpath
T - Sum of Drins, Dutch Soil Remediation Circular 2009 - intervention values for soil
U - ANZECC 1992
V - EPA Publication 621 (Upper Limit for Fill Material)
W - USEPA (Regional Screening Levels) – for TCE the non-carcinogenic screening level has been adopted as it is lower than the carcinogenic screening level when the carcinogenic level is adjusted for 1 x10-5 target risk;

12.3 Sampling

Soil sampling was conducted in accordance with relevant parts of the Victorian EPA guidelines and the recommendations of the Australian Standard 4482.1 (2005).

The site under investigation measures approximately 6.6 hectares and minimum-sampling points required for site characterisation in accordance with AS4482.1 (2005) is eighty-five (85) test locations based on detection of circular hot spots using square grid (Refer to Appendix J for Test Location Plan).

Eighty-five (85) grid locations were undertaken during soil sampling programme by Geoaquitards Environmental as part of this assessment. Soil samples were generally collected at depths of 0.15 m, 0.50 m, 1.00 m, 1.50 m, 2.00 m, 2.50 m and 3.00 m during soil sampling.

12.3.1 Summary of Soil Sampling Program

The following soil sampling program was completed as part of Environmental Due Diligence:

TABLE 12 – SOIL SAMPLING PROGRAM

Sample Date	Investigation	Works
27 February 2017	Soil Sampling	Soil bore samples from eleven (11) were collected (Method: Mechanical auger drilling by Civiltest Pty Ltd)
3 July 2017	Soil Sampling	Soil bore samples from seventy-four (74) were collected (Method: Mechanical auger drilling by Civiltest Pty Ltd)

- The site under investigation measures approximately 6.6 hectares and minimum-sampling points required for site characterisation in accordance with AS4482.1 (2005) is eighty-five (85) test locations.
- The total number of sampling locations investigated for the subject land was eighty-five (85) test locations.

12.4 Decontamination

Decontamination of sampling equipment was completed in accordance with the Standard Procedure. Decontamination of the sampling scoop and hand augers comprised of removal of encrusted materials; brush scrubbing with detergent cleaning solution and a rinse in potable water. Disposable gloves were worn during collection of samples. Gloves were replaced after each sample was collected, to prevent cross contamination.

Decontamination of sampling equipment was completed in accordance with the recommendations of the Australian Standard 4482.1 (2005) Decontamination of sampling equipment procedure.

12.5 Summary of Laboratory Analysis for Soil

All analyses were completed by NATA registered laboratories; the primary laboratory was Eurofins | mgt. Inter-laboratory QC analyses were conducted by Eurofins | mgt and ALS Laboratory Group. Soil samples were analysed individually as follows:

TABLE 13 - ANALYSIS OF SOIL SAMPLES

Eurofins | mgt Name	Analyses	Number of samples
Eurofins | mgt Suite - B4A	TRH/BTEX/PAH/Phenols	6
Eurofins | mgt - M12	As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn	196 DUPLICATE 1, DUPLICATE 2, DUPLICATE 4, DUPLICATE 5, DUPLICATE 6, DUPLICATE 7, DUPLICATE 8 SPLIT 1, SPLIT 2, SPLIT 3, SPLIT 4, SPLIT 5, SPLIT 6, SPLIT 7, SPLIT 8 RINSATE
Eurofins | mgt Suite B7	TRH/BTEX/PAH/As,Cd,Cr,Cu,Ni,Pb,Zn,Hg	6
Vic EPA IWRG 621 (Solids) – R1	TRH/PAH/Phenols/OCP/PCB/VOC/Vinyl Chloride/Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn)/Cr6+/CN/Total Fluoride/pH	4
NEPM Screen for Soil Classification – R21	%Fe/CEC/pH(CaCl2)/TOC/% Clay Content	2
NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding Methyl Mercury/PBDE - R20	PAHs(as BaP TEQ)/ Total PAHs/ Phenol/ Pentachlorophenol/ 2-Methylphenol(o-cresol)/ 3&4-Methylphenol(m+p-cresol)/ OCP(DDT, DDE, DDD, Aldrin, Dieldrin, Chlordane, Endosulfan, Endrin, Heptachlor, HCB, Methoxychlor, Mirex, Toxaphene)/ Acid Herbicides (2.4.5-T, 2.4-D, MCPA, MCPB, Mecoprop, Picloram)/ Atrazine/ Chlorpyrifos/ Bifenthrin/ PCBs/ Metals (As, Be, B, Cd, Co, Cr, Cu, Pb, Hg, Mn, Ni, Se, Zn)/ Cr6+/ CN Free	2
Other analytes	Asbestos Absence /Presence	35
	TRH C6-C9	TRIP

Note:

For details of the samples analysed please refer to the Laboratory Summary in Appendix F.

12.6 Subsurface Conditions

Based on the field observations made during the assessment and shown on the borehole logs included in Appendix I, the subsurface conditions at the site are summarised as follows:

TABLE 14 – GENERALISED SUBSURFACE PROFILE

Depth (m)	Soil Description	Comments
0.00 – 3.00	FILL, sandy CLAY/sandy CLAY/silty SAND, crushed rock, bricks, landfill rubbish, plastic , glass pieces, brown/grey/orange, moist, medium dense/stiff	Landfill odour was detected at number of locations generally below 1.0m depth in the fill horizon
0.50-3.0m	Silty SAND/clayey SAND, brown moist, medium dense	No odour was detected in the natural horizon

12.7 Soil Vapour Survey

Each soil sample was screened in the field for the presence of volatile organic vapours, such as petroleum vapours, using a calibrated portable photo ionisation detector (PID). Soil vapour results were generally indicative of non-contaminated conditions to generally indicative of low-level volatile organic contamination (<detectable limits) to low readings but higher than ambient indicating low-level volatile organic contamination. PID data is provided in Appendix I borehole logs. A guide to interpreting PID readings is provided in Table 15 below (Refer to Appendix K for Equipment Calibration Records). For field PID range in each location refer to Appendix I borehole logs.

TABLE 15 – INTERPRETATION OF PID READINGS

PID Reading	Interpretative Guide
< 15	Generally indicative of non-contaminated conditions (by measurable species)
15 – 100	Low readings but higher than ambient. In some cases, instrument response may be affected by moisture or naturally occurring soil vapours. Generally indicative of low-level volatile organic contamination.
100 – 500	Can generally be accepted as a reliable indicator of volatile organic contamination. Concentrations detected may be affected by weathering, distance from source or soil profile conditions.
> 500	Positive indication of volatile organic contamination. Higher values indicate fresh, volatile compounds in high concentrations.

12.8 Soil Assessment Results

The following screening was adopted in accordance with the:

- Guidelines for Issue of Certificates and Statements of Environmental Audit EPA Publication 759.3 (December 2015).
- Environmental Auditing (Contaminated Land) EPA Publication 860.1, August 2007.
- Guide to the investigation and sampling of sites with potentially contaminated soil, part 1: Non-volatile and semi-volatile compounds, AS 4482.1-2005.
- Guide to the sampling and investigation of potentially contaminated soil, part 2: Volatile substances, AS 4482.2-1999.

- Guidance on the design of sampling programs, sampling techniques and preservation and handling of samples.

Additionally asbestos absence/presence testing was undertaken as a part of this assessment, and following standards and methods were adopted by the Eurofins | mgt Laboratory:

- Conducted in accordance with the Australian Standard AS 4964 – 2004.
- Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

The soil assessment results at the site for Environmental Due Diligence Assessment soil sampling were compared with adopted soil criteria and provided in Appendix H - Laboratory Data Presentation.

Summary of the site condition at the site and concentrations above the adopted criteria were detected as follows:

12.8.1 Heavy Metals

Level of heavy metals in all the soil samples analysed is less than the adopted criteria at the test locations tested at the site except for the following heavy metals.

Soil Assessment Results for Lead

The levels of Lead in the following samples were reported concentrations above the adopted criteria.

TABLE 16 - SAMPLES ABOVE ADOPTED CRITERIA – LEAD

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 HIL C (600 mg/kg)	26 @ 0.50M (detected 1000 mg/kg) 48 @ 3.00M (detected 7200 mg/kg)	FILL horizon	- 95% Chebyshev (Mean, Sd) UCL (236.2 mg/kg) [1] is less than the adopted criteria. - **The standard deviation is 485 mg/kg and is above the 50% of the adopted investigation level.** - **48 @ 3.00M is exceeding 250% of relevant Investigation level**

NOTE:

1. Population for the calculation of the Lead UCLs and standard deviation is 225 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

Soil Assessment Results for Arsenic

The levels of Arsenic in the following samples were reported concentrations above the adopted criteria. However the detected concentration was acceptable based on the Statistical Assessment.

TABLE 17 - SAMPLES ABOVE ADOPTED CRITERIA – ARSENIC

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 EIL Urban Residence/ Public Open Space (100 mg/kg)	48 @ 3.00M (detected 110 mg/kg) 59 @ 0.15M (detected 110 mg/kg)	FILL horizon	- 95% Chebyshev (Mean, Sd) UCL (10.22 mg/kg) [2] is less than the adopted criteria. - The standard deviation is 11 mg/kg and is less than the 50% of the adopted investigation level. - No single value exceeding 250% of relevant Investigation level

NOTE:

2. Population for the calculation of the Arsenic UCLs and standard deviation is 225 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

Soil Assessment Results for Cadmium

The levels of Cadmium in the following samples were reported concentrations above the adopted criteria. However the detected concentration was acceptable based on the Statistical Assessment.

TABLE 18 - SAMPLES ABOVE ADOPTED CRITERIA – CADMIUM

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
CSQG Residential/Parkland Use (10 mg/kg)	48 @ 3.00M (detected 14 mg/kg)	FILL horizon	- 95% Student's-t UCL (0.644 mg/kg) [3] is less than the adopted criteria. - The standard deviation is 0.98 mg/kg and is less than the 50% of the adopted investigation level. - No single value exceeding 250% of relevant Investigation level

NOTE:

3. Population for the calculation of the Cadmium UCLs and standard deviation is 225 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

Soil Assessment Results for Copper

The levels of Copper in the following samples were reported concentrations above the adopted criteria.

TABLE 19 - SAMPLES ABOVE ADOPTED CRITERIA – COPPER

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 EIL Urban Residence/ Public Open Space (220 mg/kg)	17 @ 0.50M (detected 360 mg/kg) 48 @ 3.00M (detected 170000 mg/kg)	FILL horizon	- **95% Chebyshev (Mean, Sd) UCL (4068 mg/kg) [4] is above the adopted criteria.** - **The standard deviation is 11332 mg/kg and is above the 50% of the adopted investigation level.** - **48 @ 3.00M is exceeding 250% of relevant Investigation level.**
NEPM 2013 HIL C (17000 mg/kg)	48 @ 3.00M (detected 170000 mg/kg)	FILL horizon	- **95% Chebyshev (Mean, Sd) UCL (4068 mg/kg) [4] is above the adopted criteria.** - **The standard deviation is 11332 mg/kg and is above the 50% of the adopted investigation level.** - **48 @ 3.00M is exceeding 250% of relevant Investigation level.**

NOTE:

4. Population for the calculation of the Copper UCLs and standard deviation is 225 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

Soil Assessment Results for Nickel

The levels of Nickel in the following samples were reported concentrations above the adopted criteria. However the detected concentration was acceptable based on the Statistical Assessment.

TABLE 20 - SAMPLES ABOVE ADOPTED CRITERIA – NICKEL

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 EIL Urban Residence/ Public Open Space (270 mg/kg)	48 @ 3.00M (detected 300 mg/kg)	FILL horizon	- 95% Chebyshev (Mean, Sd) UCL (18.68 mg/kg) [5] is less than the adopted criteria. - The standard deviation is 21 mg/kg and is less than the 50% of the adopted investigation level. - No single value exceeding 250% of relevant Investigation level

NOTE:

5. Population for the calculation of the Nickel UCLs and standard deviation is 225 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

Soil Assessment Results for Tin

The levels of Tin in the following samples are reported concentrations above the adopted criteria.

TABLE 21 - SAMPLES ABOVE ADOPTED CRITERIA – TIN

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
ANZECC B Levels 1992 (50 mg/kg)	25 @ 0.50M (detected 270 mg/kg) 40 @ 3.00M (detected 51 mg/kg) 46 @ 1.00M (detected 500 mg/kg) 48 @ 2.00M (detected 99 mg/kg) 48 @ 3.00M (detected 790 mg/kg) 54 @ 3.00M (detected 140 mg/kg) 55 @ 2.50M (detected 120 mg/kg) 56 @ 3.00M (detected 150 mg/kg) 57 @ 1.00M (detected 340 mg/kg) 65 @ 1.00M (detected 73 mg/kg) DUPLICATE 6 (detected 320 mg/kg) SPLIT 6 (detected 213 mg/kg)	FILL horizon	- 95% Chebyshev (Mean, Sd) UCL (47.1 mg/kg) [6] is less than the adopted criteria. - **The standard deviation is 75 mg/kg and is above the 50% of the adopted investigation level.** - **25 @ 0.50M, 46 @ 1.00M, 48 @ 3.00M, 54 @ 3.00M, 56 @ 3.00M, 57 @ 1.00M, DUPLICATE 6 and SPLIT 6 are exceeding 250% of relevant Investigation level.**

NOTE:

6. Population for the calculation of the Tin UCLs and standard deviation is 217 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

Soil Assessment Results for Zinc

The levels of Zinc in the following samples are reported concentrations above the adopted criteria.

TABLE 22 - SAMPLES ABOVE ADOPTED CRITERIA – ZINC

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 EIL Urban Residence/ Public Open Space (730 mg/kg)	25 @ 0.50M (detected 1300 mg/kg) 48 @ 3.00M (detected 120000 mg/kg) 49 @ 0.15M (detected 6100 mg/kg) 49 @ 0.50M (detected 960 mg/kg) 77 @ 3.00M (detected 1900 mg/kg)	FILL horizon	- **95% Chebyshev (Mean, Sd) UCL (2994 mg/kg) [7] is above the adopted criteria.** - **The standard deviation is 8003 mg/kg and is above the 50% of the adopted investigation level.** - **48 @ 3.00M, 49 @ 0.15M and 77 @ 3.00M are exceeding 250% of relevant Investigation level.**
NEPM 2013 HIL C (30000 mg/kg)	48 @ 3.00M (detected 120000 mg/kg)	FILL horizon	- 95% Chebyshev (Mean, Sd) UCL (2994 mg/kg) [7] is less than the adopted criteria. - The standard deviation is 8003 mg/kg and is less than the 50% of the adopted investigation level. - **48 @ 3.00M is exceeding 250% of relevant Investigation level.**

NOTE:

7. Population for the calculation of the Zinc UCLs and standard deviation is 225 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

12.8.2 PAH (Total)

The level of PAHs in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.3 Benzo (a) Pyrene TEQ (Upper bound)

The level of Benzo (a) pyrene TEQ (Upper bound) in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.4 Benzo (a) Pyrene

The level of Benzo (a) pyrene in the following sample is reported concentrations above the adopted criteria. However the detected concentration was acceptable based on the Statistical Assessment.

TABLE 23 - SAMPLES ABOVE ADOPTED CRITERIA – BENZO (A) PYRENE

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 ESLs for Urban Residential, Coarse Soil (0.7 mg/kg)	47 @ 1.50M (detected 0.9 mg/kg) 68 @ 1.50M (detected 1.3 mg/kg)	FILL horizon	- 95% Student's-t UCL (0.66 mg/kg) [8] is less than the adopted criteria. - The standard deviation is 0.29 mg/kg and is less than the 50% of the adopted investigation level. - No single value exceeding 250% of relevant Investigation level

NOTE:

8. Population for the calculation of the Benzo (a) pyrene UCLs and standard deviation is 17 Samples for FILL Horizon (Refer to Appendix H– UCL Calculation)

12.8.5 Naphthalene

The level of Naphthalene in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.6 BTEX/MAH

The level of BTEX/MAH in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.7 Organochlorine Pesticides

The level of Organochlorine Pesticides analysed is less than the adopted criteria at the test locations tested.

12.8.8 Cyanide (Free)

The level of Cyanide (Free) analysed is lower than the detection limits at the test locations tested.

12.8.9 TRH C6-C10 less BTEX (F1) Fraction

The level of TRH C6-C10 less BTEX (F1) analysed is less than the adopted criteria at the test locations tested.

12.8.10 TRH C10-C16 Fraction

The level of TRH C10-C16 in following soil samples analysed is less than the adopted criteria at the test locations tested.

12.8.11 TRH >C10-C16 less Naphthalene (F2) Fraction

The level of TRH >C10-C16 less Naphthalene (F2) in following soil sample analysed is less than the adopted criteria at the test locations tested.

12.8.12 TRH >C34 – C40 Fraction

The levels of TRH > C34 – C40 fraction in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.13 TRH >C16-C34 (F3) Fraction

The levels of TRH >C16-C34 fraction in the following sample is reported concentrations above the adopted criteria.

TABLE 24 - SAMPLES ABOVE ADOPTED CRITERIA – TRH >C16-C34

Adopted criteria	Samples above adopted criteria	Soil horizon	Statistical Assessment
NEPM 2013 ESLs for Urban Residential, Coarse Soil (300 mg/kg)	47 @ 1.50M (detected 840 mg/kg) 54 @ 2.50M (detected 970 mg/kg) 62 @ 1.50M (detected 370 mg/kg) 63 @ 1.50M (detected 360 mg/kg)	FILL horizon	- **95% Chebyshev (Mean, Sd) UCL (570.5 mg/kg) [9] is above the adopted criteria.** - **The standard deviation is 297 mg/kg and is above the 50% of the adopted investigation level.** - **47 @ 1.50M and 54 @ 2.50M are exceeding 250% of relevant Investigation level**

NOTE:

9. Population for the calculation of the TRH >C16-C34 UCLs and standard deviation is 15 Samples for FILL Horizon (Refer to Appendix H – UCL Calculation)

12.8.14 Polychlorinated Biphenyls (Total PCB)

The level of Total PCB in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.15 Phenol

The level of phenol in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.16 Fluoride

The level of Fluoride in all the soil samples at the site analysed is less than the adopted criteria at the test locations tested.

12.8.17 Units of pH

The pH unit in the soil samples representative of the at the site range 7.2 – 8.8 pH units and three (3) samples were in alkaline range are exceeding the ANZECC/NHMRC (background A Level) environmental soil quality guidelines of 6 to 8 pH units.

The pH unit in the ten (10) soil samples tested during soil sampling program at the site and range as follows:

- No samples in acidic range;

- Seven (7) samples in 6 to 8 pH range; and
- Three (3) samples in alkaline range (8.2 – 8.8 pH units).
- Fill horizon pH range 7.3 – 8.8 pH units.
- Natural soil pH ranges 7.2 pH units.

Soil samples representative of the site range 7.2 – 8.8 pH units (Alkaline) is exceeding the adopted ANZECC/NHMRC (background A Level) environmental soil quality guidelines of 6 to 8 pH units for screening of maintenance of ecosystems and production of food, flora and fibre. This may have slight impact on the sensitive plants.

Samples are less than the adopted Australian Standard 2159-2009 Piling Design and Installation guidelines of pH (>5.5 pH units) for screening of building and structures.

12.8.18 Moisture

The moisture ranges from 1.1 % – 35% during soil sampling. This demonstrates that moist soils were generally moist and some wet soil was also encountered at some test locations during the time of investigation.

12.8.19 ASLP Results

Following samples reported soil concentrations above the adopted criteria:

Two (2) samples reported concentration above the adopted NEPM HIL C (2013) criteria for Lead.

Two (2) samples reported concentration above adopted NEPM 2013 EIL Urban Residence/Public Open Space Criteria for Arsenic.

One (1) sample reported concentration above adopted CSQG Residential/Parkland Use Criteria for Cadmium.

Two (2) samples reported concentration above adopted NEPM 2013 EIL Urban Residence/Public Open Space Criteria and One (1) sample reported concentration above the adopted NEPM HIL C (2013) criteria for Copper

One (1) sample reported concentration above adopted NEPM 2013 EIL Urban Residence/Public Open Space Criteria for Nickel.

Twelve (12) samples reported concentration above adopted ANZECC B Levels 1992 Criteria for Tin.

Five (5) samples reported concentration above adopted NEPM 2013 EIL Urban Residence/Public Open Space Criteria and One (1) sample reported concentration above the adopted NEPM HIL C (2013) criteria for Zinc.

Two (2) samples reported concentration above the adopted NEPM 2013 ESLs for Urban Residential, Coarse Soil criteria for Benzo (a) pyrene.

Additional tests were undertaken on the soil samples detected with concentrations above the adopted criteria and the details are as follows:

Australian Standard Leaching Protocol (ASLP) testing was undertaken for the contaminants of concern, in particular Lead, Arsenic, Cadmium, Copper, Nickel, Tin, Zinc and Benzo (a) pyrene. Tests results of Lead, Arsenic, Cadmium, Copper, Nickel, Tin, Zinc and Benzo (a) pyrene were less than the adopted IWRG 621 cleanfill criteria.

TABLE 25 - ASLP RESULTS

Sample Numbers	Lead in mg/L	Arsenic in mg/L	Cadmium in mg/L	Copper in mg/L	Nickel in mg/L	Tin in mg/L	Zinc in mg/L	Benzo(a) pyrene in mg/L
IWRG 621 Table 2 Soil Hazard Categorisation Thresholds – ASLP 1 (mg/L)	**1**	**0.7**	**0.2**	**200**	**2**	**-**	**300**	**1**
61 AT 1.00M	0.17	0.02	<0.005	0.03	0.09	<0.5	2.1	-
68 AT 0.50M	-	-	-	-	-	-	-	<1

(Refer to Appendix H – ASLP Results.)

12.8.20 Asbestos

Asbestos absence/presence testing was undertaken in the following soil samples as a part of this report and the results are as follows for the site:

TABLE 26 - ASBESTOS DETECTION RESULTS

Eurofins | mgt Report Number: 535906-AID and 552701-AID

Test Location Number	Eurofins | mgt Lab Number	Asbestos Detection Results
1 AT 0.15M	17-Fe28347	No asbestos detected. Organic fibre detected. No respirable fibres detected.
3 AT 0.15M	17-Fe28355	No asbestos detected. Organic fibre detected. No respirable fibres detected.
6 AT 0.15M	17-Fe28360	No asbestos detected. Organic fibre detected. No respirable fibres detected.
7 AT 0.15M	17-Fe28362	No asbestos detected. Organic fibre detected. No respirable fibres detected.
73 @ 0.15M	17-Jl02188	No asbestos detected. Organic fibre detected. No respirable fibres detected.
68 @ 0.15M	17-Jl02193	No asbestos detected. Organic fibre detected. No respirable fibres detected.
62 @ 0.15M	17-Jl02197	No asbestos detected. Organic fibre detected. No respirable fibres detected.
54 @ 0.15M	17-Jl02200	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Test Location Number	Eurofins | mgt Lab Number	Asbestos Detection Results
74 @ 0.15M	17-Jl02206	No asbestos detected. Organic fibre detected. No respirable fibres detected.
63 @ 2.00M	17-Jl02213	No asbestos detected. Organic fibre detected. No respirable fibres detected.
55 @ 2.00M	17-Jl02216	No asbestos detected. Organic fibre detected. No respirable fibres detected.
47 @ 2.00M	17-Jl02221	No asbestos detected. Organic fibre detected. No respirable fibres detected.
46 @ 2.00M	17-Jl02225	No asbestos detected. Organic fibre detected. No respirable fibres detected.
38 @ 1.50M	17-Jl02229	No asbestos detected. Organic fibre detected. No respirable fibres detected.
31 @ 2.00M	17-Jl02232	No asbestos detected. Organic fibre detected. No respirable fibres detected.
30 @ 2.00M	17-Jl02236	No asbestos detected. Organic fibre detected. No respirable fibres detected.
39 @ 2.00M	17-Jl02242	**Chrysotile asbestos detected in fibre cement fragments.** **Approximate raw weight of asbestos containing material = 0.95g** **Organic fibre detected.**
32 @ 2.00M	17-Jl02246	No asbestos detected. Organic fibre detected. No respirable fibres detected.
33 @ 2.00M	17-Jl02251	No asbestos detected. Organic fibre detected. No respirable fibres detected.
61 @ 0.15M	17-Jl02258	No asbestos detected. Organic fibre detected. No respirable fibres detected.
53 @ 0.15M	17-Jl02261	No asbestos detected. Organic fibre detected. No respirable fibres detected.
45 @ 0.15M	17-Jl02264	No asbestos detected. Organic fibre detected. No respirable fibres detected.
67 @ 0.50M	17-Jl02269	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Test Location Number	Eurofins | mgt Lab Number	Asbestos Detection Results
67 @ 2.00M	17-Jl02270	No asbestos detected. Organic fibre detected. No respirable fibres detected.
52 @ 1.00M	17-Jl02276	No asbestos detected. Organic fibre detected. No respirable fibres detected.
44 @ 0.15M	17-Jl02279	No asbestos detected. Organic fibre detected. No respirable fibres detected.
44 @ 2.00M	17-Jl02280	No asbestos detected. Organic fibre detected. No respirable fibres detected.
57 @ 0.15M	17-Jl02281	No asbestos detected. Organic fibre detected. No respirable fibres detected.
65 @ 0.15M	17-Jl02285	No asbestos detected. Organic fibre detected. No respirable fibres detected.
65 @ 2.50M	17-Jl02288	No asbestos detected. Organic fibre detected. No respirable fibres detected.
75 @ 0.15M	17-Jl02291	No asbestos detected. Organic fibre detected. No respirable fibres detected.
69 @ 0.15M	17-Jl02296	No asbestos detected. Organic fibre detected. No respirable fibres detected.
64 @ 0.15M	17-Jl02302	No asbestos detected. Organic fibre detected. No respirable fibres detected.
56 @ 0.15M	17-Jl02306	No asbestos detected. Organic fibre detected. No respirable fibres detected.
48 @ 0.15M	17-Jl02310	No asbestos detected. Organic fibre detected. No respirable fibres detected.
43 @ 0.15M	17-Jl02318	No asbestos detected. Organic fibre detected. No respirable fibres detected.
51 @ 0.15M	17-Jl02322	No asbestos detected. Organic fibre detected. No respirable fibres detected.
59 @ 0.15M	17-Jl02326	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Test Location Number	Eurofins | mgt Lab Number	Asbestos Detection Results
70 @ 0.50M	17-Jl02329	No asbestos detected. Organic fibre detected. No respirable fibres detected.

12.9 Site Condition: Soil

The soil condition of the site in accordance with the relevant SEPP protected beneficial uses of the land for the site are as follows:

12.9.1 Human health

The following samples reported concentration above the adopted HIL "C" - public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths soil criteria:

Lead:

- 26 @ 0.50M and 48 @ 3.00M in the FILL horizon.

Copper:

- 48 @ 3.00M in the FILL horizon.

Zinc:

- 48 @ 3.00M in the FILL horizon.

The soil analysis demonstrated concentration of Lead, Copper and Zinc were above the NEPM HIL "C" - public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths soil criteria and all other potential contaminants were less than the NEPM HIL "C" - public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths soil criteria at the site.

12.9.2 Maintenance of Ecosystems and Production of Food, Flora and Fibre

The soil analysis demonstrated that the concentration of potential contaminants was below the adopted US EPA Ecological Soil Screening Levels (ECO-SSLs), Canadian Environmental Quality guidelines (2007) for Residential/Parkland Land Use and EPA Publication 621 (Upper Limit for Fill Material), oil criteria's for all the analytes tested at the site.

12.9.2.1 NEPM Ecological Investigation Levels

The following samples reported concentration above the adopted EIL Urban Residential/ Public Open Space NEPM 2013 criteria.

Copper:

- 17 @ 0.50M and 48 @ 3.00M in FILL horizon.

Zinc:

- 25 @ 0.50M, 48 @ 3.00M, 49 @ 0.15M, 49 @ 0.50M and 77 @ 3.00M in FILL horizon.

12.9.2.2 NEPM Ecological Screening Levels

The following samples reported concentration above the adopted ESLs for Urban Residential, Coarse Soil NEPM 2013 criteria.

TRH >C16-C34:

- 47 @ 1.50M, 54 @ 2.50M, 62 @ 1.50M and 63 @ 1.50M in FILL horizon.

12.9.2.3 ANZECC B Levels 1992

The following samples reported concentration above the adopted ANZECC B Levels 1992 criteria.

Tin:

- 25 @ 0.50M, 40 @ 3.00M, 46 @ 1.00M, 48 @ 2.00M, 48 @ 3.00M, 54 @ 3.00M, 55 @ 2.50M, 56 @ 3.00M, 57 @ 1.00M, 65 @ 1.00M, DUPLICATE 6 and SPLIT 6 in FILL horizon.

12.9.3 Buildings and structures

Test results were less than the adopted Australian Standard 2159-2009 Piling Design and Installation guidelines of pH (>5.5 pH units) for screening of building and structures.

12.9.4 Aesthetics

Chrysotile asbestos (Raw weight of asbestos containing material 0.95g in a fibre cement fragment) was detected at location 39 AT 2.00M.

Putrescible Odour was reported at the following sampling locations 13, 14, 15, 29, 30, 31, 32, 33, 34, 37, 38, 39, 40, 41, 44, 45, 46, 47, 49, 52, 53, 54, 55, 56, 57, 60, 61, 62, 63, 64, 65, 67, 68, 69, 72, 73, 74, 75 and 76.

TABLE 27 – SUMMARY OF SITE CONDITION

Beneficial Uses	Adopted Criteria	Analytes And Limit For Adopted Criteria	Samples Above Adopted Criteria	Soil Horizon	Depth (m)
Human Health	NEPM 2013 HIL C	Lead (600 mg/kg)	26 @ 0.50M (detected 1000 mg/kg)	FILL	0.50
			48 @ 3.00M (detected 7200 mg/kg)	FILL	3.00
		Copper (17000 mg/kg)	48 @ 3.00M (detected 170000 mg/kg)	FILL	3.00
		Zinc (30000 mg/kg)	48 @ 3.00M (detected 120000 mg/kg)	FILL	3.00
Maintenance of Ecosystems	ANZECC B Levels 1992	Tin (50 mg/kg)	25 @ 0.50M (detected 270 mg/kg)	FILL	0.50
			40 @ 3.00M (detected 51 mg/kg)	FILL	3.00
			46 @ 1.00M (detected 500 mg/kg)	FILL	1.00
			48 @ 2.00M (detected 99 mg/kg)	FILL	2.00

Beneficial Uses	Adopted Criteria	Analytes And Limit For Adopted Criteria	Samples Above Adopted Criteria	Soil Horizon	Depth (m)
			48 @ 3.00M (detected 790 mg/kg)	FILL	3.00
			54 @ 3.00M (detected 140 mg/kg)	FILL	3.00
			55 @ 2.50M (detected 120 mg/kg)	FILL	2.50
			56 @ 3.00M (detected 150 mg/kg)	FILL	3.00
			57 @ 1.00M (detected 340 mg/kg)	FILL	1.00
			65 @ 1.00M (detected 73 mg/kg)	FILL	1.00
	EIL Urban Residential/ Public Open Space NEPM 2013	Copper (220 mg/kg)	17 @ 0.50M (detected 360 mg/kg)	FILL	0.50
			48 @ 3.00M (detected 170000 mg/kg)	FILL	3.00
		Zinc (730 mg/kg)	25 @ 0.50M (detected 1300 mg/kg)	FILL	0.50
			48 @ 3.00M (detected 120000 mg/kg)	FILL	3.00
			49 @ 0.15M (detected 6100 mg/kg)	FILL	0.15
			49 @ 0.50M (detected 960 mg/kg)	FILL	0.50
			77 @ 3.00M (detected 1900 mg/kg)	FILL	3.00
	NEPM 2013 ESLs for Urban Residential, Coarse Soil (300 mg/kg)	TRH >C16-C34 (300 mg/kg)	47 @ 1.50M (detected 840 mg/kg)	FILL	1.50
			54 @ 2.50M (detected 970 mg/kg)	FILL	2.50
			62 @ 1.50M (detected 370 mg/kg)	FILL	1.50
			63 @ 1.50M (detected 360 mg/kg)	FILL	1.50

13 QUALITY ASSURANCE (QA) AND QUALITY CONTROL (QC)

Quality Assurance is interpreted to mean those systems, procedures and documents which facilitate management, correct execution and recording of evidence and completion of all the tasks necessary to generate the information and data necessary to characterise the site contamination and satisfy other project objectives. Quality Control is the specific tests and checks which verify and demonstrate that data generated is reliable and reproducible.

13.1 QA Programs

The basic elements of quality assurance adopted as part of this project included:

- Use of written procedures to control the execution of the work.
- Review of the work plan and results, in each stage of the study by the auditor.
- Engagement of experienced environmental specialist in fieldwork.
- Engagement of a laboratory accredited by NATA for the tests required.

13.2 QC Testing Elements

The elements of the quality control testing included the following field based program:

- Blind Replicate
- Split Sample
- Rinsate Blank
- Trip Blanks

Additionally, the laboratory conducts NATA requisite tests including:

- Duplicates
- Spikes
- Method Blanks

13.3 Quality Control Samples

Soil and water samples – including field Quality Control (QC) duplicate samples – were submitted to Eurofins | mgt. Inter-laboratory split sample (field QC sample) was submitted to a secondary laboratory ALS Laboratory Group. Eurofins | mgt, Eurofins | mgt and ALS laboratories are accredited by the National Association of Testing Authorities (NATA) for the chemical analysis conducted.

Acceptance Criteria for Quality Control Sample (Blind Replicate and Split Samples).

Relative Percent Difference from the two samples was calculated in the following way:

(Result No1 – Result No 2) / (Mean result) x 100

Typical 30%–50% of mean concentration of analyte; this variation can be expected to be higher for organic analysis than for inorganics, and for low concentration of analytes.

In accordance with Australian Standard 4482.1- 2005 acceptance criteria for quality control samples are as follows:

Blind Replicate sample – required 1 for every 20 samples collected and required mean concentration of analyte is 30%-50%.

Split sample – required 1 for every 20 samples collected and required mean concentration of analyte is 30%-50% determined by both laboratories.

Rinsate blank – required 1 per piece of equipment per day and the significance of the rinsate blank analysis will need to be evaluated with respect to the actual field samples.

As a part of field Quality Control (QC) sampling the following number of samples was collected: (Refer to Appendix H - Quality Control Samples Results – Soil)

TABLE 28– QUALITY CONTROL SAMPLES

Number of samples Retrieved	Number of samples analysed	Description	Number of Duplicate Samples Retrieved	Number Split samples Retrieved	Rinsate sample Retrieved
543	278	During Soil Sampling on 27 February 2017 and 3 July 2017	8	8	1

Field Quality Control (QC) sample collection rate met the Australian Standard 4482.1-2005 acceptance criteria.

13.3.1 Blind Replicate Sample – Duplicate

Duplicate samples were collected from the same point and removed from the ground in a single action into one individual sample and one duplicate sample, and submitted to the same laboratory as two individual samples. The relative percent difference exceeding 30%–50% of mean concentration of analyte was calculated and the details are as shown in Refer to Appendix H Quality Control Samples Results. Additionally number of samples were split by the laboratory for duplicate analysis since the initial duplicate analysis did not meet the required number of duplicate sample analysis additional samples were requested to be split by the laboratory for analysis.

The following blind replicate samples were collected from the subject site during the soil sampling works to identify the variation in analyte concentration and repeatability of the laboratory analysis.

TABLE 29 – DUPLICATE SAMPLES RELATIVE PERCENT DIFFERENCE – DURING SOIL SAMPLING WORKS

Date Sampled	Bore Location and depth	First Individual Sample Sample ID	Duplicate of the First Individual Sample Sample ID	Relative Percent Difference Exceeding 30%-50% of Mean Concentration Of Analyte
3/07/2017	54 @ 1.00M DUPLICATE 1	M17-Jl02202	M17-Jl02205	< 30%–50% of mean concentration for all the analytes tested except for Mercury (66.67%), Silver (90.91%) and Tin (93.88%)
3/07/2017	55 @ 0.50M DUPLICATE 2	M17-Jl02215	M17-Jl02238	< 30%–50% of mean concentration for all the analytes tested except for Lead (146.7%), Copper (87%) and Zinc (55.32%)

Date Sampled	Bore Location and depth	First Individual Sample Sample ID	Duplicate of the First Individual Sample Sample ID	Relative Percent Difference Exceeding 30%-50% of Mean Concentration Of Analyte
3/07/2017	52 @ 0.50M DUPLICATE 4	M17-Jl02275	M17-Jl02267	< 30%–50% of mean concentration for all the analytes tested except for Lead (55.56%) and Chromium (61.31%)
3/07/2017	56 @ 2.00M DUPLICATE 5	M17-Jl02308	M17-Jl02315	< 30%–50% of mean concentration for all the analytes tested except for Lead (55.57%) and Copper (97.67%)
3/07/2017	57 @ 1.00M DUPLICATE 6	M17-Jl02283	M17-Jl02316	< 30%–50% of mean concentration for all the analytes tested except for Arsenic (55.56%), Mercury (142.9%), Silver (77.94%), Zinc (94.34%) and Copper (65.75%)
3/07/2017	51 @ 1.50M DUPLICATE 7	M17-Jl02323	M17-Jl02317	< 30%–50% of mean concentration for all the analytes tested except for Lead (54.79%) and Copper (52.10%)
3/07/2017	58 @ 0.50M DUPLICATE 8	M17-Jl02367	M17-Jl02346	< 30%–50% of mean concentration for all the analytes tested except for Chromium (51.12%)

13.3.2 Split Samples

Split samples were removed from the ground in a single action into one primary laboratory sample and one secondary laboratory sample, and submitted to respective laboratories for the analysis of the same analytes. The relative percent difference exceeding 30%–50% of mean concentration of analyte was calculated and the details are as shown in Refer to Appendix H - Quality Control Samples Results.

The following blind replicate samples were collected from the subject site during the soil sampling works to identify the variation in analyte concentration and repeatability of the laboratory analysis and the details are as follows:

TABLE 30 – SPLIT SAMPLES RELATIVE PERCENT DIFFERENCE - DURING SOIL SAMPLING WORKS

Date Sampled	Bore Location and depth	Primary Laboratory Eurofins - MGT Sample ID	Secondary Laboratory ALS Sample ID	Relative Percent Difference Exceeding 30%–50% of Mean Concentration of Analyte
3/07/2017	54 @ 1.00M SPLIT 1	M17-Jl02202	EM1708657001	< 30%–50% of mean concentration for all the analytes tested except for Chromium (62.07%), Copper (72.94%), Mercury (125%), Nickel (60.87%) and Tin (101.9%)
3/07/2017	55 @ 0.50M SPLIT 2	M17-Jl02215	EM1708657002	< 30%–50% of mean concentration for all the analytes tested except for Lead (130.2%), Chromium (66.67%), Copper (78.26%), Nickel (150%) and Zinc (124.32%)

Date Sampled	Bore Location and depth	Primary Laboratory Eurofins - MGT Sample ID	Secondary Laboratory ALS Sample ID	Relative Percent Difference Exceeding 30%– 50% of Mean Concentration of Analyte
3/07/2017	53 @ 1.00M SPLIT 3	M17-Jl02263	EM1708657003	< 30%–50% of mean concentration for all the analytes tested except for Silver (131.3%) and Zinc (55.97%)
3/07/2017	52 @ 0.50M SPLIT 4	M17-Jl02275	EM1708657004	< 30%–50% of mean concentration for all the analytes tested except for Chromium (67.94%)
3/07/2017	56 @ 2.00M SPLIT 5	M17-Jl02308	EM1708657005	< 30%–50% of mean concentration for all the analytes tested except for Lead (105%), Nickel (75%) and Zinc (114.96%)
3/07/2017	57 @ 1.00M SPLIT 6	M17-Jl02283	EM1708657006	< 30%–50% of mean concentration for all the analytes tested except for Lead (79.07%), Arsenic (96.77%), Mercury (133.3%) and Silver (75.86%)
3/07/2017	51 @ 1.50M SPLIT 7	M17-Jl02323	EM1708657007	< 30%–50% of mean concentration for all the analytes tested except for Chromium (66.67%), Nickel (54.55%) and Zinc (71.60%)
3/07/2017	58 @ 0.50M SPLIT 8	M17-Jl02367	EM1708657008	< 30%–50% of mean concentration for all the analytes tested except for Lead (61.02%)

13.3.3 Rinsate Blanks

Final rinse solution (rinsate blank) sample named as Rinsate was collected during the decontamination process of the trowel which was used for collecting soil samples during the soil sampling works and the details are as shown in Refer to Appendix H - Quality Control Samples Results is as follows:

TABLE 31 – RINSATE SAMPLE RESULTS- DURING SOIL SAMPLING WORKS

Date Sampled	Sample ID	Test Results exceedance
3/07/2017	RINSATE M17-Jl02564	< LOR for all the analytes tested

13.3.4 Trip Blank

These are used to monitor potential contamination during transport and storage. Trip blanks are sent from the laboratory with empty containers and remain with the other samples throughout sampling. A blank is a portion of deionised water that is carried through all or part of the sampling process. The volume used for the blank sample was the same as for the samples. The following blank samples were collected from the subject site to identify any cross contamination during transport. The concentration of analytes was calculated and the details are as shown in Refer to Appendix H - Quality Control Samples Results and the summary of Trip Blank Results is as follows:

TABLE 32 – TRIP BLANK RESULTS - DURING SOIL SAMPLING WORKS

Date Sampled	Trip Blank Sample ID	Analytes Concentration
3/07/2017	TRIP M17-Jl02565	< LOR for all the analytes tested

Trip blank sample results for soil sampling program were within acceptable limit for all the analytes.

13.4 Field QA/QC Procedure Review

13.4.1 Chain-Of-Custody Forms

All the samples collected during the time of investigation were properly handled according to AS 4482.1-2005. Handling and transportation of all the samples from the site to the Laboratory was accomplished with Chain-of-Custody procedures. The chain of custody forms are presented in Appendix G. Sample integrity was maintained and samples were properly stored in sealed sample containers. All samples collected during the time of investigation were kept in chilled eskies and forwarded to the laboratory for analysis.

13.4.2 Occupational Health and Safety

All those who were engaged during the time of investigation were made aware of the likely contaminants, the type of operation to be carried out on-site, and the type of equipment to be used. All protective equipment such as gloves, first aid equipment, boots etc. were used properly, and all the disposable items used for sampling were collected in a bag and disposed of off-site properly.

13.4.3 Field QC Results (duplicates and split samples)

In summary, *Geoaquitards Environmental* considers that the field QC results are acceptable for the purposes of this investigation. Where RPDs were outside the acceptable range, sampling procedures, laboratory analytical methods and laboratory results were investigated. A review of analytical results with RPD exceedances indicates that all the unacceptable results can be explained via one or more of the following points and are not considered to compromise the integrity of the analytical results.

- Variations can be expected to be higher for organic compared with inorganic analyses and for low analytes concentrations, which will exaggerate the percentage differences with respect to small total concentration differences., Therefore, calculated RPD values outside the acceptable range are not considered to affect the integrity of the results as both results indicate the presence of impact.
- Reported concentrations are well below adopted criteria and therefore calculated RPD values outside the acceptable range are not considered to affect the integrity of the results as both results are well below the criteria.
- Difficulties associated with collecting a homogenous sample when sampling for volatile analytes such as BTEX / MAH and TPH (C6–C9) and semi-volatile analytes such as TPH (C10–C36), can cause variations in calculated RPD values.

- RPD values exceeding the acceptance criteria may be due to the nature of the associated heterogeneous material (FILL material) in the soil sample not forming a representative material of the blind replicate sample.

Blind replicate sample results were evaluated according to AS 4482.1-2005. The variation can be expected to be higher for organic analytes than for inorganic analytes and low concentration of analytes. Soil sample - test results demonstrated RPD values is detailed in section 21.3. The test results were within the acceptance criteria.

13.4.4 Evaluation of Field Quality Control Results

Soil and Groundwater samples – including Field Quality Control (QC) duplicate samples – were submitted to Eurofins | mgt. Inter-laboratory split sample (Field QC triplicate sample) was submitted to a secondary laboratory ALS Laboratory Group. All samples were submitted to the laboratory within the holding times for analysis and the detection limits were within the acceptable limit of NATA requirements.

Eurofins | mgt and ALS laboratories are accredited by the National Association of Testing Authorities (NATA) for the chemical analysis conducted. Field QC results are presented in Appendix H. In summary, *Geoaquitards Environmental* considers that the Field QC results are acceptable for the purposes of this investigation.

13.5 Laboratory Quality Control Results

The following Quality Control Results provided in this section are used for laboratory Quality Purposes.

13.5.1 Analysis Blank

The component of the analytical signal, which is not derived from the sample but from the reagents and also from glassware, can be determined by processing solvents and reagents in exactly the same manner as for samples. If this is below the maximum acceptable method blank (established during the method validation), this contribution is subtracted from the gross analytical signal for each analysis before calculating the sample analyte concentration. The results are within the acceptance criteria for the analysis of blank samples (Ref: Appendix F Laboratory reports for analysis blank results).

13.5.2 Duplicate Analysis

This is the complete duplicate analysis of a sample from the process batch. The sample selected for duplicate analysis is the sample where the analyte concentration was easily measurable. The variation between duplicate analyses has been recorded by the laboratories and results are in their Quality Results (Ref: Appendix F, Laboratory reports for Duplicate results). The results are within the acceptance criteria for the analysis of Duplicate samples.

13.5.3 Laboratory Control Sample

These tests were performed on a standard material or control matrix fortified with analytes class. Recovery check portions were fortified at concentrations, which were easily quantified but within the range of concentrations expected for real samples. The results are within the acceptance criteria adopted by the respective laboratories for the analysis of Laboratory Control Samples. (Ref: Appendix F, Laboratory reports for Laboratory control sample results).

13.5.4 Matrix Spikes

Matrix Spikes tests were performed to monitor the performance of the analytical methods used, and to determine whether matrix interference exists. Matrix Spike Recovery is within the acceptance criteria adopted by the respective laboratories for the analysis of Laboratory Control Samples. (Ref: Appendix F, Laboratory reports for Matrix spikes results).

13.5.5 Surrogate Spikes

Surrogate spikes are known additions to each sample, blank and matrix spike or reference sample analysis. Surrogate Spikes Analysis results are within the acceptance criteria (Ref: Appendix F, Laboratory reports for surrogate spikes results).

In summary, the Laboratory Quality Control Results reveal a level of quality control equivalent to the accepted general standard of practice. The detection limits used in the laboratory program were appropriate to meet the investigation objectives.

13.6 Summary of QA / QC

In summary, the QA / QC test results reveal a level of quality control equivalent to the accepted general standard of practice and achieved overall completeness of QA / QC dataset to meet the required objective. The test results provided by Eurofins Mgt and ALS Environmental to meet the required objective and test procedures used in the laboratories were appropriate to meet the investigation objectives.

13.6.1 Summary of Uncertainties and Assumptions

- The sampling points provide a representation of the conditions within the vicinity of the sampling point.
- The number of sampling points provides statistically meaningful data.

14 RISKS TO THE BENEFICIAL USES OF LAND

The Environmental Due Diligence Assessment was undertaken to assess the suitability of the land for all potential land uses and the site must be assessed against the criteria established for any land uses (including the most sensitive). These land uses are as follows:

- parks and reserves;
- agriculture;
- sensitive use (high density);
- sensitive use (other – including medium and low density residential, child care centres, pre-schools or primary schools);
- recreational/open spaces;
- commercial; and
- industrial

In accordance with the Land SEPP the relevant beneficial uses of land to be protected under unrestricted use for the site is as follows:

14.1 Beneficial Uses of Land

In accordance with the Land SEPP (2002), the relevant beneficial uses of the land to be protected for unrestricted use are:

- Maintenance of Ecosystems(Modified and Highly Modified);
- Human Health;
- Building & Structures;
- Aesthetics; and
- Production of Food, Flora and Fibre.

The nature of the proposed development of the site is Residential Aged Care Facility.

A discussion on the beneficial uses and a summary of site-specific risks to the beneficial uses of land are outlined in Table 33.

TABLE 33 – BENEFICIAL USES OF LAND

Risks to Beneficial Uses of Land for Beneficial Uses to be Protected for Unrestricted Land Use	Summary of Soil Contamination Risks to Beneficial Uses of Land
Maintenance of Ecosystems: based on the above discussion, all of the samples are below the adopted criteria for the maintenance of ecosystems except for Copper, Zinc, TRH >C16-C34 and Tin; hence this beneficial use is considered precluded for unrestricted use.	Based on the reported results this beneficial use is considered to be precluded.
Human Health: based on the above discussion, all of the samples are below the adopted criteria for human health except for Lead, Copper and Zinc and this beneficial use is considered precluded for unrestricted use.	Based on the reported results this beneficial use is considered to be precluded.
Buildings and Structures: pH levels generally indicate a non-aggressive exposure setting. This beneficial use is therefore considered protected.	pH levels concentrations in soil indicate non-aggressive exposure settings for steel and concrete structures in accordance with AS2159-2009 Piling – Design and Installation. This is considered to be low risk to the beneficial use of buildings and structures. This beneficial use is therefore considered protected.
Aesthetics: Generally odours were reported at number of sampling locations. Strong putrescible odour detected was detected in some samples at landfill area locations.	Based on the field observation, this beneficial use is considered precluded for sensitive and recreational/open space use.
Production of Food, Flora and Fibre: concentration is above the adopted ecological criteria, and therefore this beneficial use is considered to be precluded for unrestricted use.	Based on the reported results this beneficial use is considered to be precluded.

A review of the condition of the land (at the time of the completion of the Environmental Due Diligence) with respect to these beneficial uses is presented below.

14.1.1 Maintenance of Ecosystems

Zinc at location 25 @ 0.50M, 48 @ 3.00M, 49 @ 0.15M, 49 @ 0.50M and 77 @ 3.00M and Copper at location 17 @ 0.50M and 48 @ 3.00M in FILL horizon reported concentration above the adopted EIL Urban Residential/ Public Open Space NEPM 2013 criteria.

TRH >C16-C34 at location 47 @ 1.50M, 54 @ 2.50M, 62 @ 1.50M and 63 @ 1.50M in FILL horizon reported concentration above the adopted NEPM 2013 ESLs for Urban Residential, Coarse Soil criteria.

Tin at location 25 @ 0.50M, 40 @ 3.00M, 46 @ 1.00M, 48 @ 2.00M, 48 @ 3.00M, 54 @ 3.00M, 55 @ 2.50M, 56 @ 3.00M, 57 @ 1.00M, 65 @ 1.00M, DUPLICATE 6 and SPLIT 6 in FILL horizon reported concentration above the adopted ANZECC B Levels 1992 criteria.

The site has been substantially modified and considered as highly modified ecosystems. The concentrations of chemicals remaining at the site are above the adopted EILs. As a result, the site will affect the maintenance of relevant ecosystems and the beneficial use – maintenance of ecosystems – is precluded.

14.1.2 Human Health

Lead at location 26 @ 0.50M and 48 @ 3.00M, Copper at location 48 @ 3.00M and Zinc at location 48 @ 3.00M in FILL horizon reported concentration above the adopted HIL "C" - public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths soil criteria.

Therefore the beneficial use – human health – is precluded. However the elevated concentration of copper and zinc is detected at 3.0m depth and lead is detected at 0.50m and at 3.0m and they are not leaching in to underlying soils and therefore it is considered they are less likely to impact current uses at the site.

14.1.3 Buildings and Structures

Based on soil pH analytical data and the concentrations reported by the laboratory the beneficial use – buildings and structures – is protected at the site under all land use scenarios (including the most sensitive use).

14.1.4 Aesthetics

Putrescible Odour was reported at the following sampling locations 13, 14, 15, 29, 30, 31, 32, 33, 34, 37, 38, 39, 40, 41, 44, 45, 46, 47, 49, 52, 53, 54, 55, 56, 57, 60, 61, 62, 63, 64, 65, 67, 68, 69, 72, 73, 74, 75 and 76. However the odour was generally detected below 1.0m depth and therefore current users will not be impacted by the odour.

Chrysotile asbestos (Raw weight of asbestos containing material 0.95g in a fibre cement fragment) was detected at test location 39 AT 2.00M, however surface samples tested did not detect any asbestos containing material, and therefore it is considered current users of the site will not be impacted by this material, however if any excavation or digging works undertaken around this area (test location 39) then further investigation must be undertaken for asbestos.

14.1.5 Production of Food, Flora and Fibre

There were exceedances of the EILs or ESLs in samples representative of the final land condition. The concentrations of chemicals remaining at the site are above the adopted EILs. As a result, the site will adversely affect the production of food, flora and fibre and the beneficial use – Production of Food, Flora and Fibre – is precluded.

14.1.6 Summary of Risks to the Beneficial Uses of Land at the Site

Based on the soil assessment undertaken for the site to assess the suitability of the land for all potential land uses the site is in its current condition is considered precluded for unrestricted land use. However further works with the consultation of EPA must be undertaken for the consideration of any beneficial uses.

15 CONCLUSIONS

The analytical results for the soil samples retrieved during the Environmental Due Diligence are presented in Appendix F. The analytical results were compared with the criteria contained in the National Environment Protection Measure 2013.

Potential contamination issues identified in Environmental Due Diligence have been assessed for the site and the soil is in its current condition is considered precluded for unrestricted land use for all uses, however can be considered restricted land use with further consultation with EPA for any future development.

16 RECOMMENDATIONS

16.1 Assessing Planning Proposal near Landfills (Extract of Publication 1625)

"EPA has prepared a draft guideline for consultation on Assessing planning proposals near landfills (Publication 1625) to help councils, environmental auditors and others involved in the landfill planning process to assess development applications. The draft guideline provides information and advice on assessing planning permit applications and planning scheme amendments regarding potential development near an operating or closed landfill".

"The draft guideline is consistent with EPA's existing policy the Landfill BPEM, but is written specifically for a planning audience, and provides more details on EPA' s expectations for an appropriate risk - based assessment of proposals".

This guideline was prompted by the VAGO Managing Landfills Audit Recommendation 13 "(EPA) works with the Metropolitan Waste and Resource Recovery Group to develop an appropriate planning process/ to ensure the Environment Protection Authority's involvement in rezoning or application process across Victoria where development adjacent to active or closed landfills may be involved".

The ultimate goal of EPA's landfill guidance is to protect the community from the impacts of landfill gas migration and amenity issues such as odour, dust and noise.

16.2 Purpose

This guideline is intended for use by planning and responsible authorities under the Planning and Environment Act 1987.

It provides information and advice on assessing planning permit applications and planning scheme amendments that would lead to development near an operating or closed landfill. More specifically, it advises on what level of assessment a planning or responsible authority should require to inform its decision, and recommends a staged, risk-based approach.

The advice in this guideline is consistent with and builds on the advice to planning and responsible authorities in Best Practice Environmental Management: Siting, Design, Operation and Rehabilitation of Landfills2 (the Landfill BPEM). Sections 5.1.5, 8.2.1 and 8.2.2 of that document are the focus of this guideline. **Further advice must be sought from EPA for the consideration of any development at the site.**

16.3 Legal status

This guideline provides information and advice. It is not legally binding.

17 LIMITATION OF THIS REPORT

This report has been provided by Geoaquitards Environmental for the sole use of the client and only for the purpose for which it was prepared. Any representation contained in the report is made only for the client.

The work was conducted, and the report has been prepared, in response to specific instructions from Abraham Albatat from Bayside City Council to whom this report is addressed, within the time and budgetary requirements of the client, and in reliance on certain data and information made available to Geoaquitards Environmental.

The findings contained within this Site Investigation are the result of standard investigation techniques used in accordance with normal practices and standards. To the best of our knowledge, they represent a reasonable interpretation of the current conditions and previous land uses for the site.

It is also noted that sub-surface conditions can change with time, and the report is based on data that was gathered at the time of the report. This services performed by Geoaquitards Environmental have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practice.

This document does not purport to provide legal advice and any conclusions or recommendations herein must not be relied as substitute for such advice. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Geoaquitards Environmental. The advice provided herein relates only to these purposes and must be reviewed by a competent Environmental Scientist/Engineer, experienced in contaminated site investigation, before being used for any other purpose and Geoaquitards Environmental accept no responsibility for other use of the advice. No warranties, expressed or implied, are offered to any third parties. No liabilities will be accepted for use of this report by any third party. This report should not be altered, amended or abbreviated, issued in part and issued incomplete in any way without prior checking and approved by Geoaquitards Environmental. Geoaquitards Environmental accepts no responsibility for any circumstances that arise from issue of the report that has been modified in any way as outlined above.

Prepared /Submitted by

GEOAQUITARDS ENVIRONMENTAL



Emmanuel Ernest

Senior Environmental Scientist

MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

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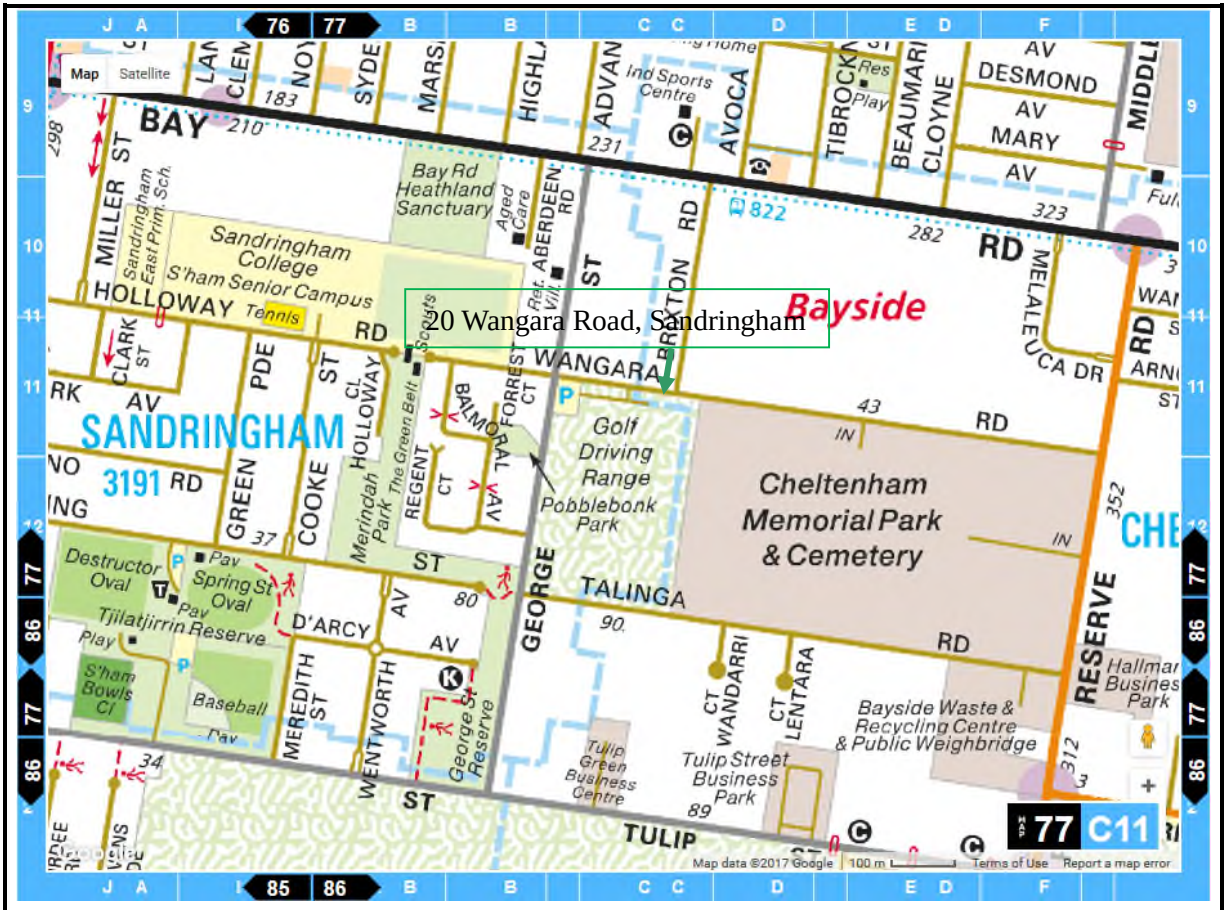
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APPENDIX A

MELWAY MAP, SITE AND SURROUNDING AERIAL VIEWS

FIGURE 3 – MELWAY MAP



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	Melway Edition	42
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Map Reference	77 C11
Date	19 July 2017	Project	Environmental Due Diligence

FIGURE 4 - SITE AND SURROUND AERIAL VIEWS



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1		
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Figure	Site and Surround Aerial Views
Date	19 July 2017	Project	Environmental Due Diligence

APPENDIX B

VIC EPA PRIORITY SITES REGISTER EXTRACT

EPA Priority Sites Register Extract

Client: Geoaquitards Environmental
Suite 49 160 Gippsland Highway
Dandenong South 3175

Client Ref: RM406-M.1
Certificate No: 45390136:72381377

Property Inquiry Details:

Street Address: 20 Wangara Road
Suburb: SANDRINGHAM
Map Reference: Melways Edition 39, Map No:77, Grid Letter: C, Grid Number: 11

Date of Search: 17/07/2017

Priority Sites Register Report:

A search of the Priority Sites Register **for the above map reference**, has indicated that this **site is not listed on, and is not in the vicinity of a site listed on the Priority Sites Register** at the date last notified by the EPA.

Important Information about the Priority Sites Register:

You should be aware that the Priority Sites Register lists only those sites for which EPA has requirements for active management of land and groundwater contamination. Appropriate clean up and management of these sites is an EPA priority, and as such, EPA has issued either a: Clean Up Notice pursuant to section 62A, or a Pollution Abatement Notice (related to land and groundwater) pursuant to section 31A or 31B of the Environment Protection Act 1970 on the occupier of the site to require active management of these sites.

The Priority Sites Register does not list all sites that are known to be contaminated in Victoria. A site should not be presumed to be free of contamination just because it does not appear on the Priority Sites Register.

Persons intending to enter into property transactions should be aware that many properties may have been contaminated by past land uses and EPA may not be aware of the presence of contamination. Municipal planning authorities hold information about previous land uses, and it is advisable that such sources of information also be consulted.

For sites listed on the Priority Sites Register, a copy of the relevant Notice, detailing the reasons for issue of the Notice, and management requirements, is available on request from EPA for $8 per Notice.

For more information relating to the Priority Sites Register, refer to EPA information bulletin: Priority Sites Register (EPA Publication 735, December 2000). For a copy of this publication, copies of relevant Notices, of for more information relating to sites listed on the Priority Sites Register, please contact EPA as given below:
EPA Information Centre
200 Victoria Street, Carlton 3053
Tel: (03) 9695 2722 Fax: (03) 9695 2610

The information contained in this Extract of the Priority Sites Register may not be used for resale or for the preparation of mailing lists or for direct marketing. Any contravention of this notice will result in immediate revocation of access (including future access) to information contained on the Priority Sites Register.

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SAI Global Property Division Pty Ltd ACN 089 586 872
Level 3, 355 Spencer St, West Melbourne 3003 T: 1300 730 000 E: epropertysupport@saiglobal.com

APPENDIX C

ROYAL HISTORICAL SOCIETY OF VICTORIA INC INFORMATION

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

Date: **11 July 2017**

Attention: **Emmanuel Ernest**

Company: **Geoaquitards Environmental**

From: **Gerardine Horgan (Administrative Officer)**

SITE SEARCH: 20 Wangara Road, Sandringham

The site for review is located on the south east corner of Wangara Road and George Street, Sandringham. The site extends through to Talinga Road which forms the southern boundary.

The site therefore has a frontage to Wangara Road (north side boundary), George Street (west side boundary) and Talinga Road (south side boundary). The Cheltenham Cemetery abuts the site on the east side.

In the Sands & McDougall Directories, up until the final edition in 1974, the site under review has been listed as being within the suburb of Cheltenham.

According to the Sands and McDougall Street Directories, Bay Road (to the north of the site) was constructed in 1876, and this area has been associated with market gardening up until the 1950's.

Wangara Roads was not listed in the Sands and MacDougall Directories until the mid-1960s.

The Cheltenham Memorial Park and Cemetery, adjacent to the site under review, was established in 1933. At that time this section of Wangara Road appears to have been an extension of Holloway Road (located to the west) and known as Holloway Road.

In the 1935 Sands & McDougall Directory the occupant of the site under review is listed as Ernest Springhall with the Cheltenham Cemetery next listed, on the east side. There is no information as to the use of the subject land.

Tel: (03) 9326 9288 Fax: (03) 9326 9477
Email: office@historyvictoria.org.au ABN 36 520 675 471 Reg. No: A2529
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ROYAL HISTORICAL SOCIETY OF VICTORIA INC.
239 A'Beckett Street, Melbourne 3000

In the 1942 directory the occupant is listed as Harry Forrest, then the cemetery. In the 1950 and 1955 directories the occupant is listed as William Moore, then the cemetery. In both these years the land directly opposite the site, on the north side of Holloway Road, is listed as W T Grant, Sandpits.

In the 1960 directory the occupant of the site under review is listed as L J Ayres.

In the 1965 directory the occupant is still listed as L J Ayres however the street name had changed from "Holloway" to "Wangara".

In the 1970 directory the occupant remains as L J Ayres, with the Cheltenham Cemetery adjacent.

In the 1974 directory (the final edition of the Sands & McDougall Directories) the occupant is listed as L J Ayres however the "City of Sandringham Council Tip" is also listed between L J Ayres and the Cemetery.

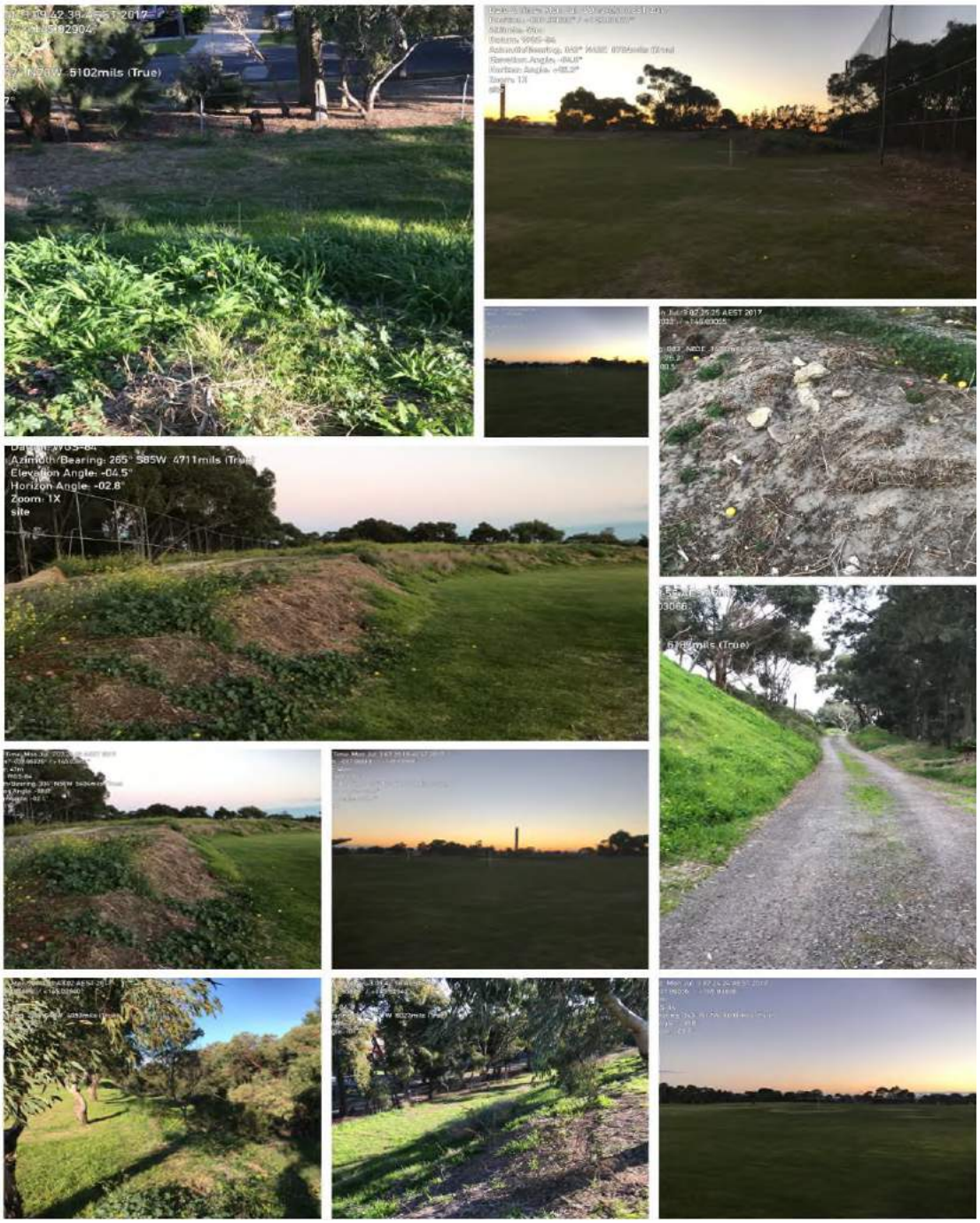
In the 1976 Melways Street Directory the site under review is listed as 'Wangara Reserve'. In the 1988 Street Directory this had changed to 'Golf Driving Range' and this is still the notation over the site in the 2017 Street Directory.

Research by Greg Buchanan

The content of the Royal Historical Society of Victoria Inc. ("RHSV") report is provided for information purposes only. While the RHSV attempts to ensure accuracy and reliability of the information contained in the report, the RHSV makes no guarantee, warranty or promise, express or implied, concerning the accuracy, completeness or authenticity of the content of the report. If any liability may not be excluded by operation of the Trade Practices Act 1974, at the RHSV's option, liability 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.

APPENDIX D
SITE PHOTOGRAPHS

FIGURE 5 - SITE PHOTOGRAPHS



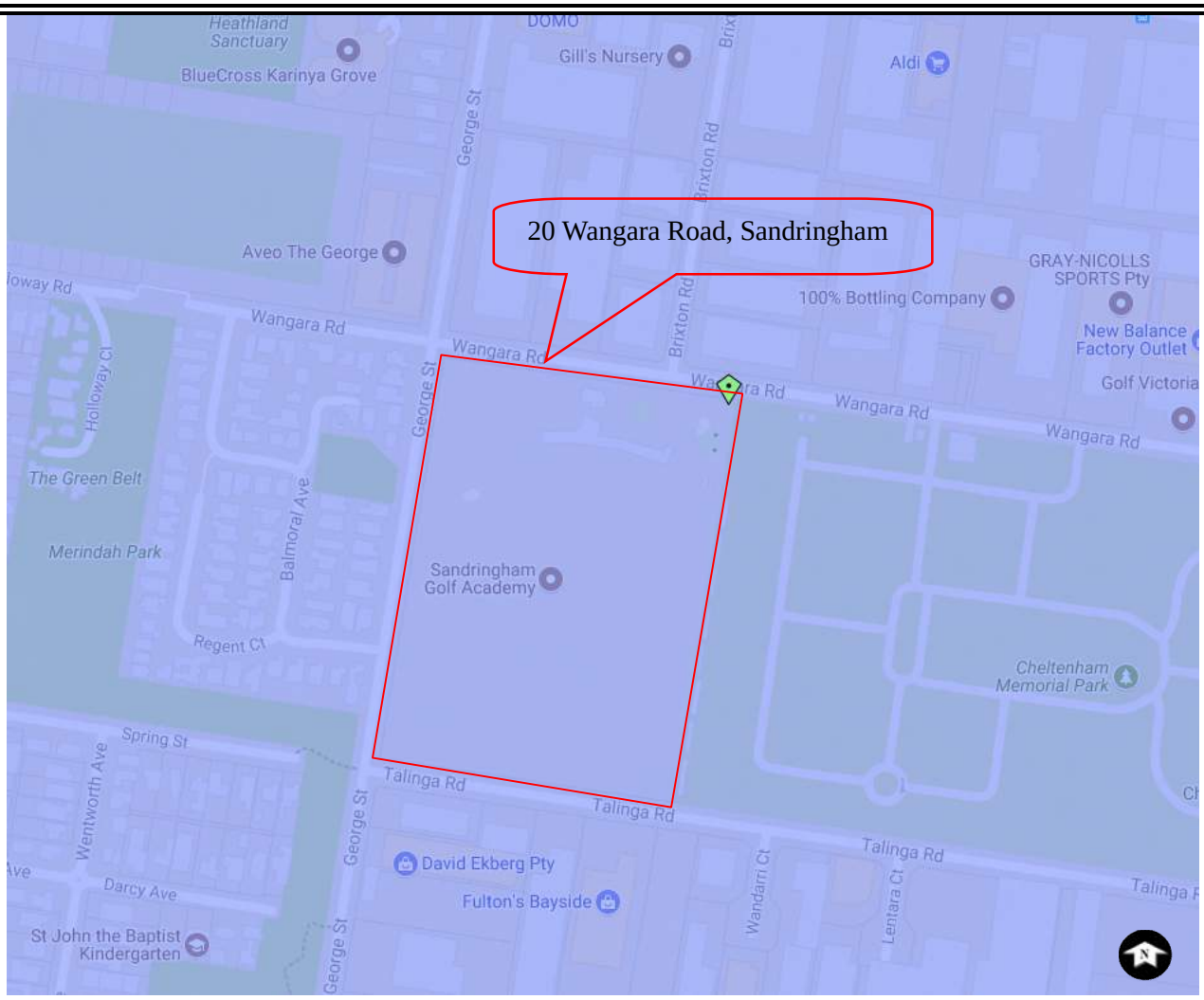
Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	Description	Site Photographs
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Photograph Date	3 July 2017
Data	19 July 2017	Project	Environmental Due Diligence

APPENDIX E

GROUNDWATER DATABASE SEARCH

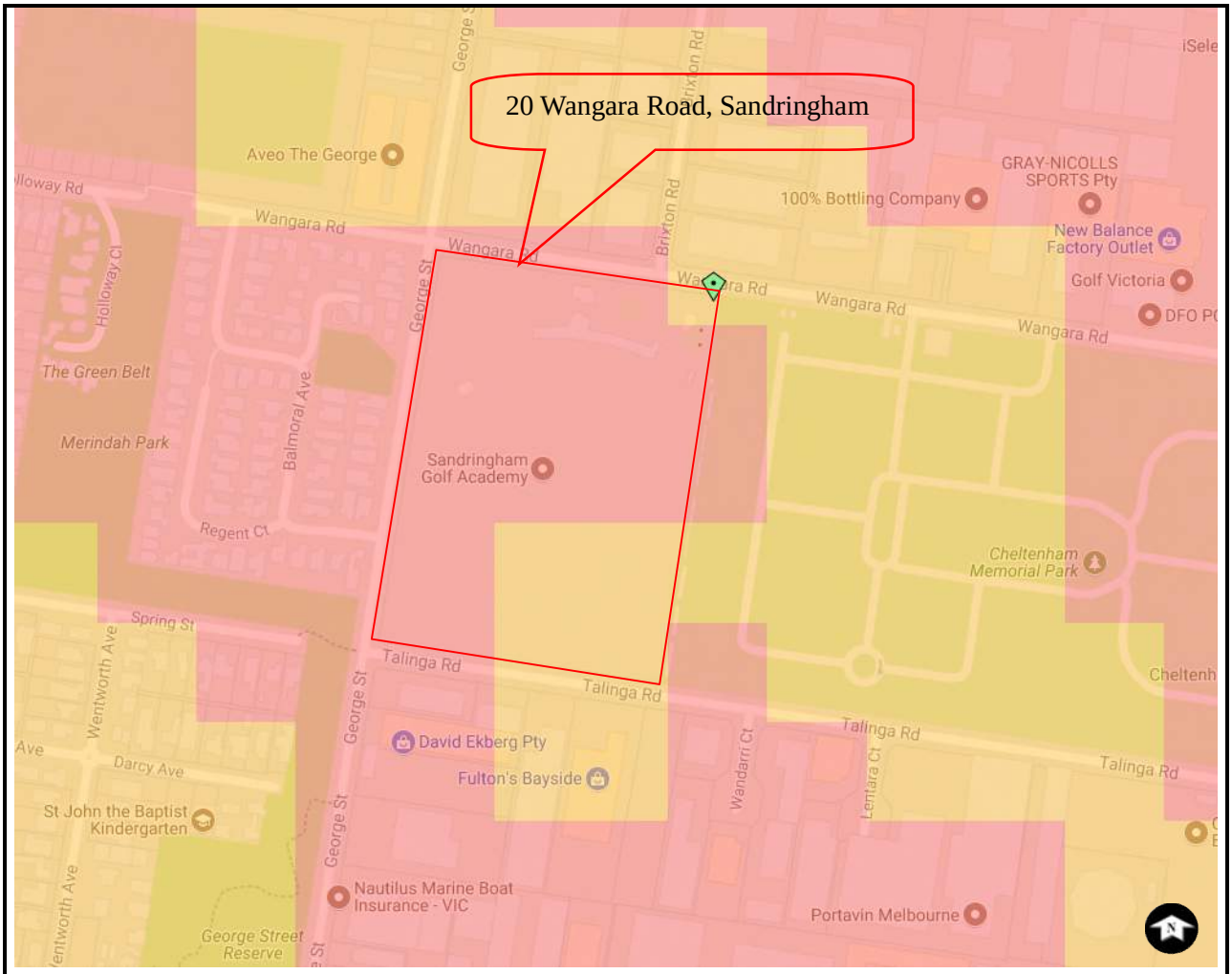
FIGURE 6 - VISUALISING VICTORIA'S GROUNDWATER (VVG) MAP – GROUNDWATER SALINITY



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	VVG Groundwater Salinity Map Legend	Groundwater salinity (DEPI) Less than 500mg/l 500-1,000mg/l 1,000-3,500mg/l 3,500-7,000mg/l 7,000-13,000mg/l 13,000-35,000mg/l Greater than 35,000mg/l
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Source	The Earth Resources web mapping application - Geovic
Date	17 July 2017	Project	Environmental Due Diligence

FIGURE 7 - VISUALISING VICTORIA'S GROUNDWATER (VVG) MAP – DEPTH TO WATERTABLE



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	VVG Depth to Watertable Map Legend	Depth to watertable (DEPI) Less than 5 metres 5 to 10 metres 10 to 20 metres 20 to 50 metres Greater than 50 metres
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Source	The Earth Resources web mapping application - Geovic
Date	17 July 2017	Project	Environmental Due Diligence

APPENDIX F

LABORATORY ANALYTICAL REPORTS

eurofins | mgt

Certificate of Analysis

Geoaquitards Environmental
PO Box 4040
Dandenong Sth
VIC 3175

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Emmanuel Ernest**

Report **552701-S**
Project name SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID RM406-M.1
Received Date Jul 03, 2017

Client Sample ID			**73 @ 0.50M**	**73 @ 1.00M**	**73 @ 1.50M**	**73 @ 3.00M**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02189**	**M17-Jl02190**	**M17-Jl02191**	**M17-Jl02192**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	60	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	73 @ 0.50M Soil M17-Jl02189 Jul 03, 2017	73 @ 1.00M Soil M17-Jl02190 Jul 03, 2017	73 @ 1.50M Soil M17-Jl02191 Jul 03, 2017	73 @ 3.00M Soil M17-Jl02192 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	99	-
p-Terphenyl-d14 (surr.)	1	%	-	-	80	-
% Moisture	1	%	7.7	15	16	8.4
Heavy Metals						
Arsenic	2	mg/kg	11	9.7	14	3.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	28	34	24
Copper	5	mg/kg	23	11	12	19
Lead	5	mg/kg	42	32	34	20
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	20	14	13	32
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	87	45	59	36

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	68 @ 0.15M Soil M17-Jl02193 Jul 03, 2017	68 @ 0.50M Soil M17-Jl02194 Jul 03, 2017	68 @ 1.50M Soil M17-Jl02195 Jul 03, 2017	68 @ 2.00M Soil M17-Jl02196 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	74	-
TRH C29-C36	50	mg/kg	-	-	53	-
TRH C10-36 (Total)	50	mg/kg	-	-	127	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	59	-

Client Sample ID			68 @ 0.15M	68 @ 0.50M	68 @ 1.50M	68 @ 2.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02193**	**M17-Jl02194**	**M17-Jl02195**	**M17-Jl02196**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	120	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	1.7	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	2.0	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	2.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	1.1	-
Benzo(a)pyrene	0.5	mg/kg	-	-	1.3	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	1.1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	1.2	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	1.2	-
Chrysene	0.5	mg/kg	-	-	1.3	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	1.9	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	0.8	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	1.0	-
Pyrene	0.5	mg/kg	-	-	1.9	-
Total PAH*	0.5	mg/kg	-	-	12.8	-
2-Fluorobiphenyl (surr.)	1	%	-	-	107	-
p-Terphenyl-d14 (surr.)	1	%	-	-	78	-
% Moisture	1	%	6.1	9.7	8.4	9.8
Heavy Metals						
Arsenic	2	mg/kg	< 2	4.7	5.1	5.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	17	9.2	9.6
Copper	5	mg/kg	< 5	10	28	26
Lead	5	mg/kg	11	18	35	36
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	< 5	23	6.9	11
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	18	24	62	220

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	62 @ 0.15M Soil M17-Jl02197 Jul 03, 2017	62 @ 0.50M Soil M17-Jl02198 Jul 03, 2017	62 @ 1.50M Soil M17-Jl02199 Jul 03, 2017	54 @ 0.15M Soil M17-Jl02200 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	280	-
TRH C29-C36	50	mg/kg	-	-	94	-
TRH C10-36 (Total)	50	mg/kg	-	-	374	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	59	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	370	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	0.5	-
Total PAH*	0.5	mg/kg	-	-	0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	106	-
p-Terphenyl-d14 (surr.)	1	%	-	-	130	-
% Moisture	1	%	5.6	8.4	14	6.9

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	62 @ 0.15M Soil M17-Jl02197 Jul 03, 2017	62 @ 0.50M Soil M17-Jl02198 Jul 03, 2017	62 @ 1.50M Soil M17-Jl02199 Jul 03, 2017	54 @ 0.15M Soil M17-Jl02200 Jul 03, 2017
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.9	12	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	10	22	< 5
Copper	5	mg/kg	< 5	12	12	7.8
Lead	5	mg/kg	57	29	57	32
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.2	0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	< 5	19	13	< 5
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	9.6	49	46	37

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	54 @ 0.50M Soil M17-Jl02201 Jul 03, 2017	54 @ 1.00M Soil M17-Jl02202 Jul 03, 2017	54 @ 2.50M Soil M17-Jl02203 Jul 03, 2017	54 @ 3.00M Soil M17-Jl02204 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	670	-
TRH C29-C36	50	mg/kg	-	-	300	-
TRH C10-36 (Total)	50	mg/kg	-	-	970	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	51	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	970	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			54 @ 0.50M	54 @ 1.00M	54 @ 2.50M	54 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02201**	**M17-Jl02202**	**M17-Jl02203**	**M17-Jl02204**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
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	-	-	0.6	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	0.6	-
2-Fluorobiphenyl (surr.)	1	%	-	-	107	-
p-Terphenyl-d14 (surr.)	1	%	-	-	131	-
% Moisture	1	%	7.9	10.0	22	12
Heavy Metals						
Arsenic	2	mg/kg	4.7	6.6	4.8	4.9
Cadmium	0.4	mg/kg	< 0.4	0.6	1.7	0.7
Chromium	5	mg/kg	14	19	29	13
Copper	5	mg/kg	11	27	20	21
Lead	5	mg/kg	38	68	360	120
Mercury	0.1	mg/kg	< 0.1	2.6	1.0	0.3
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	20	15	10	15
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	0.8	-	< 0.2
Tin	10	mg/kg	< 10	13	-	140
Zinc	5	mg/kg	61	110	280	200

Client Sample ID			DUPLICATE 1	74 @ 0.15M	74 @ 0.50M	74 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02205**	**M17-Jl02206**	**M17-Jl02207**	**M17-Jl02208**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	11	5.6	9.8	11
Heavy Metals						
Arsenic	2	mg/kg	6.4	4.7	4.2	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	11	15	16
Copper	5	mg/kg	30	17	6.8	15
Lead	5	mg/kg	72	34	16	41
Mercury	0.1	mg/kg	1.3	5.3	0.2	0.2
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	11	13	8.4	11
Selenium	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			DUPLICATE 1	74 @ 0.15M	74 @ 0.50M	74 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02205**	**M17-Jl02206**	**M17-Jl02207**	**M17-Jl02208**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Heavy Metals						
Silver	0.2	mg/kg	0.3	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	36	< 10	< 10	< 10
Zinc	5	mg/kg	92	62	29	58

Client Sample ID			63 @ 0.15M	63 @ 0.50M	63 @ 1.00M	63 @ 1.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02209**	**M17-Jl02210**	**M17-Jl02211**	**M17-Jl02212**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	200
TRH C29-C36	50	mg/kg	-	-	-	200
TRH C10-36 (Total)	50	mg/kg	-	-	-	400
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	50
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	360
TRH >C34-C40	100	mg/kg	-	-	-	100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	63 @ 0.15M Soil M17-Jl02209 Jul 03, 2017	63 @ 0.50M Soil M17-Jl02210 Jul 03, 2017	63 @ 1.00M Soil M17-Jl02211 Jul 03, 2017	63 @ 1.50M Soil M17-Jl02212 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	109
p-Terphenyl-d14 (surr.)	1	%	-	-	-	138
% Moisture	1	%	7.6	8.0	10	9.5
Heavy Metals						
Arsenic	2	mg/kg	5.5	6.5	5.2	4.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.4	16	13	7.6
Copper	5	mg/kg	9.3	72	29	13
Lead	5	mg/kg	47	130	140	53
Mercury	0.1	mg/kg	< 0.1	0.1	0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	-
Nickel	5	mg/kg	8.0	23	12	10
Selenium	2	mg/kg	< 2	< 2	< 2	-
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tin	10	mg/kg	< 10	< 10	17	-
Zinc	5	mg/kg	65	120	200	64

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	63 @ 3.00M Soil M17-Jl02214 Jul 03, 2017	55 @ 0.50M Soil M17-Jl02215 Jul 03, 2017	55 @ 2.50M Soil M17-Jl02217 Jul 03, 2017	55 @ 3.00M Soil M17-Jl02218 Jul 03, 2017
% Moisture	1	%	7.4	9.3	11	9.7
Heavy Metals						
Arsenic	2	mg/kg	7.5	6.5	10	5.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	10	28	10
Copper	5	mg/kg	21	16	30	14
Lead	5	mg/kg	65	52	55	40
Mercury	0.1	mg/kg	0.4	< 0.1	0.2	0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	14	14	22	12
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	120	29
Zinc	5	mg/kg	95	120	160	180

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	47 @ 0.15M Soil M17-Jl02219 Jul 03, 2017	47 @ 1.50M Soil M17-Jl02220 Jul 03, 2017	47 @ 3.00M Soil M17-Jl02222 Jul 03, 2017	46 @ 0.15M Soil M17-Jl02223 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	73	-	-
TRH C15-C28	50	mg/kg	-	520	-	-
TRH C29-C36	50	mg/kg	-	430	-	-
TRH C10-36 (Total)	50	mg/kg	-	1023	-	-
BTEX						
Benzene	0.1	mg/kg	-	0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	1.5	-	-
o-Xylene	0.1	mg/kg	-	0.5	-	-
Xylenes - Total	0.3	mg/kg	-	2.0	-	-
4-Bromofluorobenzene (surr.)	1	%	-	63	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	1.1	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	98	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	97	-	-
TRH >C16-C34	100	mg/kg	-	840	-	-
TRH >C34-C40	100	mg/kg	-	240	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	1.2	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	1.4	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.7	-	-
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	-	0.7	-	-
Benzo(a)pyrene	0.5	mg/kg	-	0.9	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	0.7	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	0.7	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	0.6	-	-
Chrysene	0.5	mg/kg	-	0.7	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	1.3	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	0.5	-	-
Naphthalene	0.5	mg/kg	-	< 2	-	-
Phenanthrene	0.5	mg/kg	-	0.7	-	-
Pyrene	0.5	mg/kg	-	1.2	-	-
Total PAH*	0.5	mg/kg	-	8	-	-
2-Fluorobiphenyl (surr.)	1	%	-	114	-	-
p-Terphenyl-d14 (surr.)	1	%	-	114	-	-
% Moisture	1	%	6.4	12	20	7.9

Client Sample ID			47 @ 0.15M	47 @ 1.50M	47 @ 3.00M	46 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02219**	**M17-Jl02220**	**M17-Jl02222**	**M17-Jl02223**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	8.9	4.6	10	4.3
Cadmium	0.4	mg/kg	< 0.4	0.5	1.0	< 0.4
Chromium	5	mg/kg	15	30	35	9.3
Copper	5	mg/kg	14	20	72	19
Lead	5	mg/kg	45	78	49	48
Mercury	0.1	mg/kg	< 0.1	1.6	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	-	< 5	< 5
Nickel	5	mg/kg	14	17	17	9.3
Selenium	2	mg/kg	< 2	-	< 2	< 2
Silver	0.2	mg/kg	< 0.2	-	7.9	< 0.2
Tin	10	mg/kg	< 10	-	< 10	< 10
Zinc	5	mg/kg	70	120	360	71

Client Sample ID			46 @ 1.00M	46 @ 3.00M	38 @ 0.15M	38 @ 0.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02224**	**M17-Jl02226**	**M17-Jl02227**	**M17-Jl02228**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	11	11	11	12
Heavy Metals						
Arsenic	2	mg/kg	2.8	4.7	< 2	7.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	10	< 5	15
Copper	5	mg/kg	14	14	6.1	6.1
Lead	5	mg/kg	14	39	15	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	9.2	15	< 5	6.9
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	0.2	< 0.2
Tin	10	mg/kg	500	< 10	< 10	< 10
Zinc	5	mg/kg	41	500	26	14

Client Sample ID			31 @ 0.15M	31 @ 0.50M	31 @ 3.00M	30 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02230**	**M17-Jl02231**	**M17-Jl02233**	**M17-Jl02234**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	9.1	11	23	5.7
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	5.1	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.6	< 0.4
Chromium	5	mg/kg	< 5	< 5	9.2	< 5
Copper	5	mg/kg	8.3	6.7	26	< 5

Client Sample ID			31 @ 0.15M	31 @ 0.50M	31 @ 3.00M	30 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02230	M17-Jl02231	M17-Jl02233	M17-Jl02234
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	43	47	120	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	9.7	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	1.0	< 0.2
Tin	10	mg/kg	< 10	< 10	33	< 10
Zinc	5	mg/kg	110	79	130	33

Client Sample ID			30 @ 0.50M	30 @ 3.00M	DUPLICATE 2	39 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02235	M17-Jl02237	M17-Jl02238	M17-Jl02239
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	15	17	16	6.6
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.8	< 2	2.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.8
Chromium	5	mg/kg	< 5	6.5	< 5	8.1
Copper	5	mg/kg	5.2	14	6.3	7.7
Lead	5	mg/kg	27	37	8.0	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	3.3	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	11	< 5	5.9
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	69	77	68	65

Client Sample ID			39 @ 0.50M	39 @ 1.00M	39 @ 2.50M	32 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02240	M17-Jl02241	M17-Jl02243	M17-Jl02244
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	6.5	12	17	15
Heavy Metals						
Arsenic	2	mg/kg	5.0	7.9	7.1	4.4
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.3	26	19	15
Copper	5	mg/kg	21	17	55	< 5
Lead	5	mg/kg	100	85	60	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	12	18	14	7.1

Client Sample ID			39 @ 0.50M	39 @ 1.00M	39 @ 2.50M	32 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02240	M17-Jl02241	M17-Jl02243	M17-Jl02244
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	14	21	< 10
Zinc	5	mg/kg	200	110	230	27

Client Sample ID			32 @ 0.50M	32 @ 3.00M	33 @ 0.15M	33 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02245	M17-Jl02247	M17-Jl02248	M17-Jl02249
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	10.0	12	7.9	6.7
Heavy Metals						
Arsenic	2	mg/kg	17	5.9	3.1	6.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	20	32	6.1	11
Copper	5	mg/kg	7.9	16	5.8	14
Lead	5	mg/kg	35	28	31	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	12	18	5.2	21
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	25
Zinc	5	mg/kg	31	140	33	32

Client Sample ID			33 @ 1.50M	33 @ 3.00M	40 @ 0.15M	40 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02250	M17-Jl02252	M17-Jl02253	M17-Jl02254
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	0.6
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	0.5

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	33 @ 1.50M Soil M17-Jl02250 Jul 03, 2017	33 @ 3.00M Soil M17-Jl02252 Jul 03, 2017	40 @ 0.15M Soil M17-Jl02253 Jul 03, 2017	40 @ 1.50M Soil M17-Jl02254 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	0.6
Phenanthrene	0.5	mg/kg	-	-	-	0.8
Pyrene	0.5	mg/kg	-	-	-	0.7
Total PAH*	0.5	mg/kg	-	-	-	3.2
2-Fluorobiphenyl (surr.)	1	%	-	-	-	99
p-Terphenyl-d14 (surr.)	1	%	-	-	-	107
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	<0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	81
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	83
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
NEPM 2013 Acid Herbicides						
Picloram*	0.5	mg/kg	-	-	-	< 2.5
2.4-D	0.5	mg/kg	-	-	-	< 0.5
2.4.5-T	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	113
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Mirex	0.01	mg/kg	-	-	-	< 0.05
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	0.10
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	1	mg/kg	-	-	-	< 1

Client Sample ID			33 @ 1.50M	33 @ 3.00M	40 @ 0.15M	40 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02250	M17-Jl02252	M17-Jl02253	M17-Jl02254
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
NEPM 2013 Organochlorine Pesticides						
Dibutylchlorendate (surr.)	1	%	-	-	-	81
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	83
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Pentachlorophenol	1.0	mg/kg	-	-	-	< 1
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	111
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Cyanide (free)	5	mg/kg	-	-	-	< 5
% Moisture	1	%	11	13	6.9	35
Heavy Metals						
Arsenic	2	mg/kg	4.3	9.6	3.5	5.8
Beryllium	2	mg/kg	-	-	-	< 2
Boron	10	mg/kg	-	-	-	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.5
Chromium	5	mg/kg	8.6	14	7.9	14
Cobalt	5	mg/kg	-	-	-	< 5
Copper	5	mg/kg	12	15	22	39
Lead	5	mg/kg	40	44	110	550
Manganese	5	mg/kg	-	-	-	100
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	1.0
Molybdenum	5	mg/kg	< 5	< 5	< 5	-
Nickel	5	mg/kg	9.3	18	14	9.2
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tin	10	mg/kg	< 10	24	< 10	-
Zinc	5	mg/kg	50	53	61	610

Client Sample ID			40 @ 3.00M	72 @ 0.15M	72 @ 0.50M	61 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02255	M17-Jl02256	M17-Jl02257	M17-Jl02258
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	22	4.4	4.3	13
Heavy Metals						
Arsenic	2	mg/kg	3.6	5.9	4.1	4.9
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	7.6	17	12	30
Copper	5	mg/kg	9.1	26	16	< 5
Lead	5	mg/kg	39	66	52	38
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	5.7	28	25	11
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			40 @ 3.00M	72 @ 0.15M	72 @ 0.50M	61 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02255	M17-Jl02256	M17-Jl02257	M17-Jl02258
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Tin	10	mg/kg	51	< 10	< 10	< 10
Zinc	5	mg/kg	59	93	110	16

Client Sample ID			61 @ 0.50M	61 @ 3.00M	53 @ 0.15M	53 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02259	M17-Jl02260	M17-Jl02261	M17-Jl02262
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	8.7	12	7.1	7.7
Heavy Metals						
Arsenic	2	mg/kg	7.4	5.0	3.9	4.7
Cadmium	0.4	mg/kg	< 0.4	0.7	< 0.4	< 0.4
Chromium	5	mg/kg	11	11	6.6	13
Copper	5	mg/kg	17	24	11	18
Lead	5	mg/kg	70	33	34	97
Mercury	0.1	mg/kg	< 0.1	4.2	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	10	16	7.8	19
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	75	97	49	55

Client Sample ID			53 @ 1.00M	45 @ 0.15M	45 @ 0.50M	45 @ 3.00M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02263	M17-Jl02264	M17-Jl02265	M17-Jl02266
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	22	6.0	8.9	16
Heavy Metals						
Arsenic	2	mg/kg	4.7	< 2	2.0	5.7
Cadmium	0.4	mg/kg	1.9	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	< 5	11	24
Copper	5	mg/kg	48	< 5	< 5	14
Lead	5	mg/kg	74	7.8	7.1	51
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	12	< 5	< 5	10
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	23	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	11	< 10	< 10	24
Zinc	5	mg/kg	220	13	11	110

Client Sample ID			DUPLICATE 4	67 @ 0.15M	67 @ 0.50M	60 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02267**	**M17-Jl02268**	**M17-Jl02269**	**M17-Jl02271**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	8.3	8.1	6.5	9.5
Heavy Metals						
Arsenic	2	mg/kg	2.8	3.3	3.9	9.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	11	13	12
Copper	5	mg/kg	8.4	< 5	< 5	12
Lead	5	mg/kg	13	8.2	5.5	40
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	7.8	< 5	< 5	9.4
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	21	16	< 5	86

Client Sample ID			60 @ 0.50M	60 @ 3.00M	52 @ 0.15M	52 @ 0.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02272**	**M17-Jl02273**	**M17-Jl02274**	**M17-Jl02275**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	8.5	9.1	7.1	8.4
Heavy Metals						
Arsenic	2	mg/kg	2.5	5.7	3.5	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.8	8.8	9.9	6.9
Copper	5	mg/kg	< 5	9.5	9.5	6.7
Lead	5	mg/kg	8.5	29	51	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	8.1	5.6	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	0.3
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	7.6	41	59	34

Client Sample ID			52 @ 1.00M	52 @ 2.50M	52 @ 3.00M	57 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02276**	**M17-Jl02277**	**M17-Jl02278**	**M17-Jl02281**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	14	11	12	8.9

Client Sample ID			52 @ 1.00M	52 @ 2.50M	52 @ 3.00M	57 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02276**	**M17-Jl02277**	**M17-Jl02278**	**M17-Jl02281**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	33	7.6	4.7	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	28	13	11	5.4
Copper	5	mg/kg	9.0	11	9.9	9.5
Lead	5	mg/kg	34	45	43	44
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	8.5	11	11	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	48	42	42	63

Client Sample ID			57 @ 0.50M	57 @ 1.00M	57 @ 2.50M	65 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02282**	**M17-Jl02283**	**M17-Jl02284**	**M17-Jl02285**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	11	11	11	8.8
Heavy Metals						
Arsenic	2	mg/kg	22	23	6.2	4.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	31	27	9.4	9.5
Copper	5	mg/kg	32	49	60	47
Lead	5	mg/kg	160	150	400	73
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	29	25	8.6	7.4
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	1.8	< 0.2	< 0.2
Tin	10	mg/kg	39	340	< 10	< 10
Zinc	5	mg/kg	150	140	170	170

Client Sample ID			65 @ 1.00M	65 @ 2.00M	65 @ 2.50M	65 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02286**	**M17-Jl02287**	**M17-Jl02288**	**M17-Jl02289**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	10.0	24	17	20
Heavy Metals						
Arsenic	2	mg/kg	3.9	3.9	5.8	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.3	8.3	14	12
Copper	5	mg/kg	14	38	30	32

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	65 @ 1.00M Soil M17-Jl02286 Jul 03, 2017	65 @ 2.00M Soil M17-Jl02287 Jul 03, 2017	65 @ 2.50M Soil M17-Jl02288 Jul 03, 2017	65 @ 3.00M Soil M17-Jl02289 Jul 03, 2017
Heavy Metals						
Lead	5	mg/kg	32	100	48	57
Mercury	0.1	mg/kg	< 0.1	6.6	0.2	1.9
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	17	< 5	17	9.2
Selenium	2	mg/kg	< 2	< 2	< 2	2.2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	0.2
Tin	10	mg/kg	73	< 10	25	35
Zinc	5	mg/kg	58	130	120	120

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	76 @ 2.50M Soil M17-Jl02290 Jul 03, 2017	75 @ 0.15M Soil M17-Jl02291 Jul 03, 2017	75 @ 0.50M Soil M17-Jl02292 Jul 03, 2017	75 @ 1.50M Soil M17-Jl02293 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	0.6
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	-	-	-	0.6
Total PAH*	0.5	mg/kg	-	-	-	1.2
2-Fluorobiphenyl (surr.)	1	%	-	-	-	101
p-Terphenyl-d14 (surr.)	1	%	-	-	-	115
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	76 @ 2.50M Soil M17-Jl02290 Jul 03, 2017	75 @ 0.15M Soil M17-Jl02291 Jul 03, 2017	75 @ 0.50M Soil M17-Jl02292 Jul 03, 2017	75 @ 1.50M Soil M17-Jl02293 Jul 03, 2017
Polychlorinated Biphenyls						
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	67
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	60
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
NEPM 2013 Acid Herbicides						
Picloram*	0.5	mg/kg	-	-	-	< 0.5
2.4-D	0.5	mg/kg	-	-	-	< 0.5
2.4.5-T	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	76
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Mirex	0.01	mg/kg	-	-	-	< 0.05
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	67
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	60
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Pentachlorophenol	1.0	mg/kg	-	-	-	< 1
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	107
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Cyanide (free)	5	mg/kg	-	-	-	< 5
% Moisture	1	%	9.3	7.7	15	7.8
Heavy Metals						
Arsenic	2	mg/kg	15	5.8	15	12
Beryllium	2	mg/kg	-	-	-	< 2
Boron	10	mg/kg	-	-	-	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	12	31	14
Cobalt	5	mg/kg	-	-	-	< 5

Client Sample ID			76 @ 2.50M	75 @ 0.15M	75 @ 0.50M	75 @ 1.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02290**	**M17-JI02291**	**M17-JI02292**	**M17-JI02293**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Heavy Metals						
Copper	5	mg/kg	14	8.1	5.2	11
Lead	5	mg/kg	52	39	40	47
Manganese	5	mg/kg	-	-	-	42
Mercury	0.1	mg/kg	< 0.1	0.5	< 0.1	0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	-
Nickel	5	mg/kg	16	6.7	13	8.1
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tin	10	mg/kg	< 10	< 10	< 10	-
Zinc	5	mg/kg	91	65	62	51

Client Sample ID			75 @ 2.00M	75 @ 2.50M	69 @ 0.50M	69 @ 1.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02294**	**M17-JI02295**	**M17-JI02297**	**M17-JI02298**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	14	7.2	2.6	5.9
Heavy Metals						
Arsenic	2	mg/kg	7.8	2.5	< 2	5.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	11	< 5	< 5	19
Copper	5	mg/kg	11	14	< 5	15
Lead	5	mg/kg	160	28	9.9	49
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	6.8	< 5	< 5	13
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	16	13	< 10	< 10
Zinc	5	mg/kg	150	49	20	88

Client Sample ID			69 @ 2.00M	69 @ 2.50M	69 @ 3.00M	64 @ 0.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02299**	**M17-JI02300**	**M17-JI02301**	**M17-JI02303**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	6.3	10.0	10	7.2
Heavy Metals						
Arsenic	2	mg/kg	7.0	12	7.4	2.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	15	16	6.4
Copper	5	mg/kg	15	11	15	< 5
Lead	5	mg/kg	46	43	41	29
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			69 @ 2.00M	69 @ 2.50M	69 @ 3.00M	64 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02299	M17-Jl02300	M17-Jl02301	M17-Jl02303
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	14	13	14	< 5
Selenium	2	mg/kg	< 2	< 2	2.1	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	14	34	44	< 10
Zinc	5	mg/kg	79	120	110	36

Client Sample ID			64 @ 1.00M	64 @ 2.50M	56 @ 0.15M	56 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02304	M17-Jl02305	M17-Jl02306	M17-Jl02307
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	7.0	15	7.6	5.7
Heavy Metals						
Arsenic	2	mg/kg	3.2	2.8	4.3	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.9	18	16	11
Copper	5	mg/kg	9.2	15	9.0	15
Lead	5	mg/kg	34	45	28	22
Mercury	0.1	mg/kg	0.1	0.4	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	6.0	7.1	5.9	34
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	16	< 10	< 10
Zinc	5	mg/kg	50	66	43	44

Client Sample ID			56 @ 2.00M	56 @ 3.00M	48 @ 0.15M	48 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02308	M17-Jl02309	M17-Jl02310	M17-Jl02311
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	11	28	7.3	16
Heavy Metals						
Arsenic	2	mg/kg	4.4	5.8	6.6	3.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.7	22	12	10
Copper	5	mg/kg	11	26	11	28
Lead	5	mg/kg	77	98	47	93
Mercury	0.1	mg/kg	0.1	0.3	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	11	18	10	24
Selenium	2	mg/kg	< 2	3.5	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			56 @ 2.00M	56 @ 3.00M	48 @ 0.15M	48 @ 1.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02308**	**M17-JI02309**	**M17-JI02310**	**M17-JI02311**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Heavy Metals						
Tin	10	mg/kg	< 10	150	< 10	12
Zinc	5	mg/kg	100	420	72	130

Client Sample ID			48 @ 2.00M	48 @ 3.00M	DUPLICATE 5	DUPLICATE 6
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02312**	**M17-JI02314**	**M17-JI02315**	**M17-JI02316**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	16	30	11	12
Heavy Metals						
Arsenic	2	mg/kg	6.8	110	4.9	13
Cadmium	0.4	mg/kg	1.1	14	< 0.4	2.0
Chromium	5	mg/kg	16	110	8.5	28
Copper	5	mg/kg	39	170000	32	97
Lead	5	mg/kg	83	7200	43	99
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1	0.6
Molybdenum	5	mg/kg	< 5	< 100	< 5	< 5
Nickel	5	mg/kg	11	300	11	23
Selenium	2	mg/kg	2.3	< 20	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 50	< 0.2	4.1
Tin	10	mg/kg	99	790	< 10	320
Zinc	5	mg/kg	170	120000	73	390

Client Sample ID			DUPLICATE 7	43 @ 1.50M	43 @ 2.00M	43 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02317**	**M17-JI02319**	**M17-JI02320**	**M17-JI02321**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	9.6	2.9	3.0	3.0
Heavy Metals						
Arsenic	2	mg/kg	7.6	3.7	2.7	2.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.4	< 0.4
Chromium	5	mg/kg	23	5.9	6.3	< 5
Copper	5	mg/kg	15	20	13	17
Lead	5	mg/kg	93	48	38	36
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	13	5.7	16	7.5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	93	69	450	200

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	51 @ 1.50M Soil M17-Jl02323 Jul 03, 2017	51 @ 2.50M Soil M17-Jl02324 Jul 03, 2017	51 @ 3.00M Soil M17-Jl02325 Jul 03, 2017	59 @ 0.15M Soil M17-Jl02326 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	-
Volatile Organics						
1.2.4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	-
Allyl chloride	0.5	mg/kg	-	< 0.5	-	-
Benzene	0.1	mg/kg	-	< 0.1	-	-
Bromobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroethane	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	51 @ 1.50M Soil M17-Jl02323 Jul 03, 2017	51 @ 2.50M Soil M17-Jl02324 Jul 03, 2017	51 @ 3.00M Soil M17-Jl02325 Jul 03, 2017	59 @ 0.15M Soil M17-Jl02326 Jul 03, 2017
Volatile Organics						
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
Fluorobenzene (surr.)	1	%	-	86	-	-
4-Bromofluorobenzene (surr.)	1	%	-	85	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	0.6	-	-
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	-	0.7	-	-
Total PAH*	0.5	mg/kg	-	1.3	-	-
2-Fluorobiphenyl (surr.)	1	%	-	105	-	-
p-Terphenyl-d14 (surr.)	1	%	-	115	-	-

Client Sample ID			51 @ 1.50M	51 @ 2.50M	51 @ 3.00M	59 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02323	M17-Jl02324	M17-Jl02325	M17-Jl02326
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
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	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	59	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	66	-	-
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	%	-	59	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	66	-	-
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	-	-

Client Sample ID			51 @ 1.50M	51 @ 2.50M	51 @ 3.00M	59 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02323	M17-Jl02324	M17-Jl02325	M17-Jl02326
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
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	%	-	111	-	-
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Fluoride	100	mg/kg	-	< 100	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	7.3	-	-
% Moisture	1	%	11	4.1	4.2	9.9
Heavy Metals						
Arsenic	2	mg/kg	9.2	6.9	12	110
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	30	14	18	30
Copper	5	mg/kg	8.8	9.2	17	12
Lead	5	mg/kg	53	150	35	63
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	14	12	15	22
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	110	40	80	100

Client Sample ID			59 @ 2.50M	70 @ 0.15M	70 @ 0.50M	70 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02327	M17-Jl02328	M17-Jl02329	M17-Jl02330
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	4.0	6.2	12	3.4
Heavy Metals						
Arsenic	2	mg/kg	4.5	20	20	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.9	24	41	11
Copper	5	mg/kg	26	11	13	6.3
Lead	5	mg/kg	42	47	49	34
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	8.4	13	16	6.2
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	11	< 10	< 10	16
Zinc	5	mg/kg	94	66	71	380

Client Sample ID			70 @ 3.00M	37 @ 0.15M	37 @ 0.50M	37 @ 2.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02331	M17-Jl02332	M17-Jl02333	M17-Jl02334
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	5.8	5.6	11	9.3
Heavy Metals						
Arsenic	2	mg/kg	13	< 2	3.5	4.1
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	< 5	18	< 5
Copper	5	mg/kg	55	5.1	5.2	< 5
Lead	5	mg/kg	76	43	27	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	9.5	< 5	5.3	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	170	52	35	34

Client Sample ID			29 @ 0.15M	29 @ 0.50M	29 @ 2.50M	28 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02335	M17-Jl02336	M17-Jl02337	M17-Jl02338
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	5.1	7.0	9.2	6.0
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	2.8	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	5.1	< 5	9.1	< 5
Copper	5	mg/kg	9.6	7.1	6.9	7.0
Lead	5	mg/kg	130	53	78	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	6.1
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	0.3	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	61	70	64	34

Client Sample ID			28 @ 0.50M	28 @ 2.50M	36 @ 0.15M	36 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02339	M17-Jl02340	M17-Jl02341	M17-Jl02342
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	4.9	9.3	6.4	7.8

Client Sample ID			28 @ 0.50M	28 @ 2.50M	36 @ 0.15M	36 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02339	M17-Jl02340	M17-Jl02341	M17-Jl02342
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	3.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	8.6	11
Copper	5	mg/kg	< 5	< 5	< 5	10
Lead	5	mg/kg	< 5	< 5	9.3	34
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	6.8
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	26	< 5	7.8	37

Client Sample ID			36 @ 2.00M	36 @ 2.50M	36 @ 3.00M	DUPLICATE 8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02343	M17-Jl02344	M17-Jl02345	M17-Jl02346
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	8.1	11	15	8.4
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	19	14
Copper	5	mg/kg	< 5	< 5	< 5	21
Lead	5	mg/kg	< 5	< 5	9.2	50
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	6.5	7.7
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	9.9	< 5	6.9	78

Client Sample ID			35 @ 0.15M	35 @ 0.50M	35 @ 1.50M	35 @ 2.00M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02347	M17-Jl02348	M17-Jl02349	M17-Jl02350
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	35 @ 0.15M Soil M17-Jl02347 Jul 03, 2017	35 @ 0.50M Soil M17-Jl02348 Jul 03, 2017	35 @ 1.50M Soil M17-Jl02349 Jul 03, 2017	35 @ 2.00M Soil M17-Jl02350 Jul 03, 2017
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	63	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	106	-
p-Terphenyl-d14 (surr.)	1	%	-	-	112	-
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	-

Client Sample ID			35 @ 0.15M	35 @ 0.50M	35 @ 1.50M	35 @ 2.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02347**	**M17-JI02348**	**M17-JI02349**	**M17-JI02350**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
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	%	-	-	107	-
% Moisture	1	%	3.3	3.5	8.1	5.6
Heavy Metals						
Arsenic	2	mg/kg	2.8	< 2	-	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	17	5.2	-	< 5
Copper	5	mg/kg	34	6.5	-	< 5
Lead	5	mg/kg	81	37	-	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	20	6.2	-	< 5
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	150	43	-	< 5

Client Sample ID			35 @ 2.50M	35 @ 3.00M	34 @ 2.50M	41 @ 0.15M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02351**	**M17-JI02352**	**M17-JI02353**	**M17-JI02354**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	6.5	12	10	9.2
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	16	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	21	18
Copper	5	mg/kg	< 5	< 5	26	6.1
Lead	5	mg/kg	< 5	< 5	74	71
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	27	< 5
Selenium	2	mg/kg	< 2	< 2	2.6	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	< 5	6.5	500	66

Client Sample ID			41 @ 0.50M	41 @ 1.00M	49 @ 0.15M	49 @ 0.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02355**	**M17-JI02356**	**M17-JI02357**	**M17-JI02358**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	8.9	12	11	5.6
Heavy Metals						
Arsenic	2	mg/kg	6.1	4.9	34	27
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	18	52	27
Copper	5	mg/kg	10	10	37	26
Lead	5	mg/kg	27	36	170	210
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	16	22	13	15
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	30	42	6100	960

Client Sample ID			49 @ 2.00M	42 @ 0.15M	42 @ 2.50M	42 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02359**	**M17-JI02360**	**M17-JI02361**	**M17-JI02362**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	12	6.2	15	15
Heavy Metals						
Arsenic	2	mg/kg	13	4.1	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	31	9.7	< 5	< 5
Copper	5	mg/kg	73	13	< 5	< 5
Lead	5	mg/kg	110	40	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	21	9.2	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	39	< 10	< 10	< 10
Zinc	5	mg/kg	590	60	17	< 5

Client Sample ID			50 @ 1.00M	50 @ 2.50M	50 @ 3.00M	58 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02363	M17-Jl02364	M17-Jl02365	M17-Jl02366
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	51	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	102	-
p-Terphenyl-d14 (surr.)	1	%	-	-	107	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1.0	mg/kg	-	-	< 1	-
2.4.6-Trichlorophenol	1.0	mg/kg	-	-	< 1	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	50 @ 1.00M Soil M17-Jl02363 Jul 03, 2017	50 @ 2.50M Soil M17-Jl02364 Jul 03, 2017	50 @ 3.00M Soil M17-Jl02365 Jul 03, 2017	58 @ 0.15M Soil M17-Jl02366 Jul 03, 2017
Phenols (Halogenated)						
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	%	-	-	102	-
% Clay	1	%	6.3	-	-	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	370	-	-	-
pH (units)(1:5 soil:CaCl2 extract)	0.1	pH Units	7.7	-	-	-
Total Organic Carbon	0.1	%	1.4	-	-	-
% Moisture	1	%	5.0	11	9.1	7.0
Heavy Metals						
Arsenic	2	mg/kg	-	2.3	-	6.2
Cadmium	0.4	mg/kg	-	< 0.4	-	< 0.4
Chromium	5	mg/kg	-	8.5	-	17
Copper	5	mg/kg	-	< 5	-	18
Iron	20	mg/kg	9200	-	-	-
Lead	5	mg/kg	-	7.6	-	39
Mercury	0.1	mg/kg	-	< 0.1	-	< 0.1
Molybdenum	5	mg/kg	-	< 5	-	< 5
Nickel	5	mg/kg	-	< 5	-	9.1
Selenium	2	mg/kg	-	< 2	-	< 2
Silver	0.2	mg/kg	-	< 0.2	-	< 0.2
Tin	10	mg/kg	-	< 10	-	< 10
Zinc	5	mg/kg	-	5.8	-	88
Heavy Metals						
Iron (%)	0.01	%	0.92	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	25	-	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	58 @ 0.50M Soil M17-Jl02367 Jul 03, 2017	58 @ 1.00M Soil M17-Jl02368 Jul 03, 2017	58 @ 2.50M Soil M17-Jl02369 Jul 03, 2017	66 @ 1.50M Soil M17-Jl02370 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
Volatile Organics						
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobutadiene	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			58 @ 0.50M	58 @ 1.00M	58 @ 2.50M	66 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02367	M17-Jl02368	M17-Jl02369	M17-Jl02370
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	61	-
4-Bromofluorobenzene (surr.)	1	%	-	-	60	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	80	-
p-Terphenyl-d14 (surr.)	1	%	-	-	128	-

Client Sample ID			58 @ 0.50M	58 @ 1.00M	58 @ 2.50M	66 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02367	M17-Jl02368	M17-Jl02369	M17-Jl02370
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
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	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	77	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	74	-
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	%	-	-	77	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	74	-
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	-

Client Sample ID			58 @ 0.50M	58 @ 1.00M	58 @ 2.50M	66 @ 1.50M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02367**	**M17-JI02368**	**M17-JI02369**	**M17-JI02370**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
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	%	-	-	79	-
Chromium (hexavalent)	1	mg/kg	-	-	< 1	-
Cyanide (total)	5	mg/kg	-	-	< 5	-
Fluoride	100	mg/kg	-	-	< 100	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	7.2	-
% Moisture	1	%	7.6	3.2	5.7	13
Heavy Metals						
Arsenic	2	mg/kg	3.7	8.4	< 2	19
Cadmium	0.4	mg/kg	< 0.4	0.8	< 0.4	< 0.4
Chromium	5	mg/kg	8.3	20	< 5	27
Copper	5	mg/kg	20	23	< 5	7.0
Lead	5	mg/kg	77	53	< 5	36
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	5.9	18	< 5	9.2
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	85	99	9.9	63

Client Sample ID			80 @ 0.15M	80 @ 0.50M	79 @ 1.00M	79 @ 3.00M
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-JI02371**	**M17-JI02372**	**M17-JI02373**	**M17-JI02374**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit				
% Moisture	1	%	4.0	5.6	6.6	1.9
Heavy Metals						
Arsenic	2	mg/kg	2.5	4.3	8.1	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	9.2	16	< 5
Copper	5	mg/kg	10.0	24	11	< 5
Lead	5	mg/kg	85	44	56	5.4
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	5.2	6.0	14	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	87	84	97	18

Client Sample ID			78 @ 0.15M	78 @ 0.50M	71 @ 2.50M	12 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02375	M17-Jl02376	M17-Jl02377	M17-Jl02378
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	6.3	10	4.8	2.9
Heavy Metals						
Arsenic	2	mg/kg	6.4	7.9	6.8	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	10	27	12	< 5
Copper	5	mg/kg	47	15	26	< 5
Lead	5	mg/kg	39	19	28	26
Mercury	0.1	mg/kg	5.7	1.6	1.5	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	5.8	9.2	27	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	59	27	71	20

Client Sample ID			13 @ 0.15M	13 @ 0.50M	13 @ 2.00M	13 @ 3.00M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02379	M17-Jl02380	M17-Jl02381	M17-Jl02382
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	70	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			13 @ 0.15M	13 @ 0.50M	13 @ 2.00M	13 @ 3.00M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02379	M17-Jl02380	M17-Jl02381	M17-Jl02382
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	104	-
p-Terphenyl-d14 (surr.)	1	%	-	-	109	-
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	%	-	-	106	-
% Moisture	1	%	2.1	1.5	7.0	4.8
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	-	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	< 5	< 5	-	7.2
Copper	5	mg/kg	< 5	< 5	-	< 5
Lead	5	mg/kg	11	38	-	5.6
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	13 @ 0.15M Soil M17-Jl02379 Jul 03, 2017	13 @ 0.50M Soil M17-Jl02380 Jul 03, 2017	13 @ 2.00M Soil M17-Jl02381 Jul 03, 2017	13 @ 3.00M Soil M17-Jl02382 Jul 03, 2017
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	< 5	< 5	-	< 5
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	13	25	-	< 5

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	21 @ 0.15M Soil M17-Jl02383 Jul 03, 2017	21 @ 2.50M Soil M17-Jl02384 Jul 03, 2017	22 @ 0.15M Soil M17-Jl02385 Jul 03, 2017	22 @ 0.50M Soil M17-Jl02386 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	72	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	21 @ 0.15M Soil M17-Jl02383 Jul 03, 2017	21 @ 2.50M Soil M17-Jl02384 Jul 03, 2017	22 @ 0.15M Soil M17-Jl02385 Jul 03, 2017	22 @ 0.50M Soil M17-Jl02386 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Total PAH*	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	107	-	-
p-Terphenyl-d14 (surr.)	1	%	-	112	-	-
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	%	-	106	-	-
% Moisture	1	%	16	7.4	2.9	3.0
Heavy Metals						
Arsenic	2	mg/kg	9.3	-	3.2	< 2
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	33	-	9.0	< 5
Copper	5	mg/kg	28	-	11	< 5
Lead	5	mg/kg	41	-	26	6.0
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	-	< 5	< 5
Nickel	5	mg/kg	38	-	14	< 5
Selenium	2	mg/kg	< 2	-	< 2	< 2
Silver	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tin	10	mg/kg	< 10	-	< 10	< 10
Zinc	5	mg/kg	110	-	35	7.7

Client Sample ID			22 @ 3.00M	20 @ 0.15M	20 @ 0.50M	20 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02387	M17-Jl02388	M17-Jl02389	M17-Jl02390
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	110
p-Terphenyl-d14 (surr.)	1	%	-	-	-	117
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

Client Sample ID			22 @ 3.00M	20 @ 0.15M	20 @ 0.50M	20 @ 1.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02387	M17-Jl02388	M17-Jl02389	M17-Jl02390
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
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	%	-	-	-	110
% Moisture	1	%	17	2.4	7.4	2.2
Heavy Metals						
Arsenic	2	mg/kg	2.7	< 2	15	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	15	< 5	14	-
Copper	5	mg/kg	< 5	5.5	< 5	-
Lead	5	mg/kg	6.0	27	7.2	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Molybdenum	5	mg/kg	< 5	< 5	< 5	-
Nickel	5	mg/kg	< 5	< 5	9.3	-
Selenium	2	mg/kg	< 2	< 2	< 2	-
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tin	10	mg/kg	< 10	< 10	< 10	-
Zinc	5	mg/kg	< 5	35	14	-

Client Sample ID			83 @ 0.15M	83 @ 0.50M	83 @ 1.00M	82 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02391	M17-Jl02392	M17-Jl02393	M17-Jl02394
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	4.3	4.6	8.7	6.4
Heavy Metals						
Arsenic	2	mg/kg	2.9	2.5	< 2	4.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.1	5.7	20	10
Copper	5	mg/kg	14	11	37	17
Lead	5	mg/kg	41	43	65	92
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	83 @ 0.15M Soil M17-Jl02391 Jul 03, 2017	83 @ 0.50M Soil M17-Jl02392 Jul 03, 2017	83 @ 1.00M Soil M17-Jl02393 Jul 03, 2017	82 @ 0.15M Soil M17-Jl02394 Jul 03, 2017
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	8.2	6.7	26	7.1
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	86	71	200	150

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	82 @ 0.50M Soil M17-Jl02395 Jul 03, 2017	82 @ 2.00M Soil M17-Jl02396 Jul 03, 2017	82 @ 3.00M Soil M17-Jl02397 Jul 03, 2017	81 @ 0.15M Soil M17-Jl02398 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	-
Volatile Organics						
1.2.4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	-
Allyl chloride	0.5	mg/kg	-	< 0.5	-	-
Benzene	0.1	mg/kg	-	< 0.1	-	-
Bromobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	82 @ 0.50M Soil M17-Jl02395 Jul 03, 2017	82 @ 2.00M Soil M17-Jl02396 Jul 03, 2017	82 @ 3.00M Soil M17-Jl02397 Jul 03, 2017	81 @ 0.15M Soil M17-Jl02398 Jul 03, 2017
Volatile Organics						
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroethane	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
Fluorobenzene (surr.)	1	%	-	83	-	-
4-Bromofluorobenzene (surr.)	1	%	-	84	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	82 @ 0.50M Soil M17-Jl02395 Jul 03, 2017	82 @ 2.00M Soil M17-Jl02396 Jul 03, 2017	82 @ 3.00M Soil M17-Jl02397 Jul 03, 2017	81 @ 0.15M Soil M17-Jl02398 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Total PAH*	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	110	-	-
p-Terphenyl-d14 (surr.)	1	%	-	115	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
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	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	72	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	74	-	-
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	%	-	72	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	74	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	82 @ 0.50M Soil M17-Jl02395 Jul 03, 2017	82 @ 2.00M Soil M17-Jl02396 Jul 03, 2017	82 @ 3.00M Soil M17-Jl02397 Jul 03, 2017	81 @ 0.15M Soil M17-Jl02398 Jul 03, 2017
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	%	-	109	-	-
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Fluoride	100	mg/kg	-	< 100	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	8.2	-	-
% Moisture	1	%	5.3	5.7	4.8	5.4
Heavy Metals						
Arsenic	2	mg/kg	3.6	8.7	6.0	3.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.4	< 0.4
Chromium	5	mg/kg	9.7	12	9.4	7.2
Copper	5	mg/kg	16	8.6	22	9.8
Lead	5	mg/kg	84	35	74	33
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	11	9.9	12	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	13	< 10
Zinc	5	mg/kg	200	51	180	69

Client Sample ID			84 @ 0.15M	84 @ 0.50M	85 @ 0.15M	85 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02399	M17-Jl02400	M17-Jl02401	M17-Jl02402
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	2.1	4.4	5.5	4.8
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	5.8	2.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	22	< 5
Copper	5	mg/kg	< 5	8.3	23	< 5
Lead	5	mg/kg	14	22	43	25
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	19	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	23	45	110	40

Client Sample ID			77 @ 3.00M	27 @ 0.15M	19 @ 0.15M	19 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02403	M17-Jl02404	M17-Jl02405	M17-Jl02406
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	3.5	3.9	5.0	3.7
Heavy Metals						
Arsenic	2	mg/kg	7.9	< 2	< 2	< 2
Cadmium	0.4	mg/kg	2.8	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	34	5.6	< 5	< 5
Copper	5	mg/kg	100	15	< 5	< 5
Lead	5	mg/kg	380	60	< 5	< 5
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	17	< 5	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	28	< 10	< 10	< 10
Zinc	5	mg/kg	1900	83	< 5	< 5

Client Sample ID			18 @ 0.15M	18 @ 0.50M	26 @ 0.15M	26 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02407	M17-Jl02408	M17-Jl02409	M17-Jl02410
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	2.7	1.1	7.3	8.7

Client Sample ID			18 @ 0.15M	18 @ 0.50M	26 @ 0.15M	26 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02407	M17-Jl02408	M17-Jl02409	M17-Jl02410
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	4.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	7.3
Copper	5	mg/kg	< 5	< 5	6.2	32
Lead	5	mg/kg	27	< 5	27	1000
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	9.1
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	12	< 5	18	87

Client Sample ID			14 @ 0.15M	14 @ 0.50M	15 @ 0.15M	15 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02411	M17-Jl02412	M17-Jl02413	M17-Jl02414
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	3.0	2.7	7.3	2.4
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	8.9	13	29	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	5.0
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	9.0	21	32	17

Client Sample ID			17 @ 0.15M	17 @ 0.50M	25 @ 0.15M	25 @ 0.50M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02415	M17-Jl02416	M17-Jl02417	M17-Jl02418
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
% Moisture	1	%	5.8	3.3	5.8	3.2
Heavy Metals						
Arsenic	2	mg/kg	11	< 2	16	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.7
Chromium	5	mg/kg	25	< 5	28	11
Copper	5	mg/kg	15	360	20	130

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	17 @ 0.15M Soil M17-Jl02415 Jul 03, 2017	17 @ 0.50M Soil M17-Jl02416 Jul 03, 2017	25 @ 0.15M Soil M17-Jl02417 Jul 03, 2017	25 @ 0.50M Soil M17-Jl02418 Jul 03, 2017
Heavy Metals						
Lead	5	mg/kg	16	85	24	500
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	24	< 5	28	30
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	13	< 10	270
Zinc	5	mg/kg	44	78	59	1300

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	23 @ 0.15M Soil M17-Jl02419 Jul 03, 2017	23 @ 0.50M Soil M17-Jl02420 Jul 03, 2017	23 @ 2.50M Soil M17-Jl02421 Jul 03, 2017	16 @ 0.15M Soil M17-Jl02422 Jul 03, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	64	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	23 @ 0.15M Soil M17-Jl02419 Jul 03, 2017	23 @ 0.50M Soil M17-Jl02420 Jul 03, 2017	23 @ 2.50M Soil M17-Jl02421 Jul 03, 2017	16 @ 0.15M Soil M17-Jl02422 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	107	-
p-Terphenyl-d14 (surr.)	1	%	-	-	128	-
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	%	-	-	111	-
% Clay	1	%	-	-	23	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	190	-
pH (units)(1:5 soil:CaCl2 extract)	0.1	pH Units	-	-	7.2	-
Total Organic Carbon	0.1	%	-	-	0.2	-
% Moisture	1	%	4.7	4.3	14	1.2
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	-	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	< 5	< 5	-	8.3
Copper	5	mg/kg	5.3	6.6	-	19
Iron	20	mg/kg	-	-	12000	-
Lead	5	mg/kg	5.7	15	-	55
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5

Client Sample ID			23 @ 0.15M	23 @ 0.50M	23 @ 2.50M	16 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02419	M17-Jl02420	M17-Jl02421	M17-Jl02422
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Nickel	5	mg/kg	5.6	5.9	-	11
Selenium	2	mg/kg	< 2	< 2	-	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	14	18	-	54
Heavy Metals						
Iron (%)	0.01	%	-	-	1.2	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	14	-

Client Sample ID			16 @ 0.50M	16 @ 2.50M	16 @ 3.00M	24 @ 0.15M
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			M17-Jl02423	M17-Jl02424	M17-Jl02425	M17-Jl02426
Date Sampled			Jul 03, 2017	Jul 03, 2017	Jul 03, 2017	Jul 03, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	-
Volatile Organics						
1.2.4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	-
Allyl chloride	0.5	mg/kg	-	< 0.5	-	-
Benzene	0.1	mg/kg	-	< 0.1	-	-
Bromobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	16 @ 0.50M Soil M17-Jl02423 Jul 03, 2017	16 @ 2.50M Soil M17-Jl02424 Jul 03, 2017	16 @ 3.00M Soil M17-Jl02425 Jul 03, 2017	24 @ 0.15M Soil M17-Jl02426 Jul 03, 2017
Volatile Organics						
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroethane	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
Fluorobenzene (surr.)	1	%	-	80	-	-
4-Bromofluorobenzene (surr.)	1	%	-	78	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	16 @ 0.50M Soil M17-Jl02423 Jul 03, 2017	16 @ 2.50M Soil M17-Jl02424 Jul 03, 2017	16 @ 3.00M Soil M17-Jl02425 Jul 03, 2017	24 @ 0.15M Soil M17-Jl02426 Jul 03, 2017
Polycyclic Aromatic Hydrocarbons						
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Total PAH*	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	108	-	-
p-Terphenyl-d14 (surr.)	1	%	-	114	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
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	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	70	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	67	-	-
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	%	-	70	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	67	-	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	16 @ 0.50M Soil M17-Jl02423 Jul 03, 2017	16 @ 2.50M Soil M17-Jl02424 Jul 03, 2017	16 @ 3.00M Soil M17-Jl02425 Jul 03, 2017	24 @ 0.15M Soil M17-Jl02426 Jul 03, 2017
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	%	-	106	-	-
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Fluoride	100	mg/kg	-	< 100	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	7.2	-	-
% Moisture	1	%	3.1	3.7	6.0	2.3
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	6.4	15	< 5
Copper	5	mg/kg	13	8.7	< 5	5.7
Lead	5	mg/kg	120	26	15	40
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	84	20	11	67

Client Sample ID			24 @ 2.50M	24 @ 3.00M
Sample Matrix			**Soil**	**Soil**
Eurofins | mgt Sample No.			**M17-Jl02427**	**M17-Jl02428**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit		
% Moisture	1	%	4.9	5.8
Heavy Metals				
Arsenic	2	mg/kg	6.9	3.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	8.9	5.6
Copper	5	mg/kg	12	9.6
Lead	5	mg/kg	46	66
Mercury	0.1	mg/kg	1.2	0.2
Molybdenum	5	mg/kg	< 5	< 5
Nickel	5	mg/kg	17	11
Selenium	2	mg/kg	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10
Zinc	5	mg/kg	56	64

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).

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

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B4A			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 05, 2017	14 Day
- Method: LTM-ORG-2010 TRH C6-C36			
BTEX	Melbourne	Jul 05, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 05, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 05, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jul 05, 2017	14 Day
- Method: LTM-ORG-2140 PAH and Phenols in Soils by GCMS			
Phenols (Halogenated)	Melbourne	Jul 05, 2017	14 Days
- Method: LTM-ORG-2140 PAH and Phenols in Soils by GCMS			
Phenols (non-Halogenated)	Melbourne	Jul 05, 2017	14 Day
- Method: LTM-ORG-2140 PAH and Phenols in Soils by GCMS			
Vic EPA IWRG 621 (Solids)			
Volatile Organics	Melbourne	Jul 05, 2017	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Organochlorine Pesticides	Melbourne	Jul 05, 2017	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Melbourne	Jul 05, 2017	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Chromium (hexavalent)	Melbourne	Jul 05, 2017	28 Day
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Cyanide (total)	Melbourne	Jul 05, 2017	14 Day
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Fluoride	Melbourne	Jul 06, 2017	28 Day
- Method: NEPC 404 (Fusion followed by ISE)			
pH (1:5 Aqueous extract)	Melbourne	Jul 05, 2017	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
IWRG 621 Metals : Metals M12	Melbourne	Jul 05, 2017	28 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding Methyl Mercury/PBDE			
Organophosphorus Pesticides	Melbourne	Jul 05, 2017	14 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Triazines	Melbourne	Jul 05, 2017	14 Day
- Method: USEPA 8270			
NEPM 2013 Acid Herbicides	Melbourne	Jul 05, 2017	14 Day
- Method: MGT 530			
NEPM 2013 Organochlorine Pesticides	Melbourne	Jul 05, 2017	14 Day
- Method: USEPA 8081 Organochlorine Pesticides			
NEPM 2013 Phenols	Melbourne	Jul 05, 2017	14 Day
- Method: USEPA 8270 Phenols			
NEPM 2013 Metals : Metals M12	Melbourne	Jul 05, 2017	28 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
Heavy Metals	Melbourne	Jul 05, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
NEPM Screen for Soil Classification			
% Clay	Brisbane	Jul 06, 2017	6 Day
- Method: LTM-GEN-7040			

Description	Testing Site	Extracted	Holding Time
Conductivity (1:5 aqueous extract at 25°C)	Melbourne	Jul 05, 2017	7 Day
- Method: LTM-INO-4030			
pH (units)(1:5 soil:CaCl2 extract)	Melbourne	Jul 05, 2017	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Jul 07, 2017	28 Day
- Method: APHA 5310B Total Organic Carbon			
Cation Exchange Capacity	Melbourne	Jul 06, 2017	180 Days
- Method: LTM-MET-3060 - Cation Exchange Capacity (CEC) & Exchangeable Sodium Percentage (ESP)			
% Moisture	Melbourne	Jul 04, 2017	14 Day
- Method: LTM-GEN-7080 Moisture			
Eurofins | mgt Suite B7			
Metals M8	Melbourne	Jul 05, 2017	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	73 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02188	X								
2	73 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02189			X	X					
3	73 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02190			X	X					
4	73 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02191				X			X		
5	73 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02192			X	X					
6	68 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02193	X		X	X					
7	68 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02194			X	X					
8	68 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02195				X			X		
9	68 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02196			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
10	62 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02197	X		X	X					
11	62 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02198			X	X					
12	62 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02199				X			X		
13	54 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02200	X		X	X					
14	54 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02201			X	X					
15	54 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02202			X	X					
16	54 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02203				X			X		
17	54 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02204			X	X					
18	DUPLICATE 1	Jul 03, 2017		Soil	M17-Jl02205			X	X					
19	74 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02206	X		X	X					
20	74 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02207			X	X					
21	74 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02208			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
22	63 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02209			X	X					
23	63 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02210			X	X					
24	63 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02211			X	X					
25	63 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02212				X			X		
26	63 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02213	X								
27	63 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02214			X	X					
28	55 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02215			X	X					
29	55 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02216	X								
30	55 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02217			X	X					
31	55 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02218			X	X					
32	47 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02219			X	X					
33	47 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02220				X			X		

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
34	47 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02221	X								
35	47 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02222			X	X					
36	46 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02223			X	X					
37	46 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02224			X	X					
38	46 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02225	X								
39	46 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02226			X	X					
40	38 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02227			X	X					
41	38 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02228			X	X					
42	38 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02229	X								
43	31 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02230			X	X					
44	31 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02231			X	X					
45	31 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02232	X								

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
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NATA # 1261
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Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
46	31 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02233			X	X					
47	30 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02234			X	X					
48	30 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02235			X	X					
49	30 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02236	X								
50	30 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02237			X	X					
51	DUPLICATE 2	Jul 03, 2017		Soil	M17-Jl02238			X	X					
52	39 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02239			X	X					
53	39 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02240			X	X					
54	39 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02241			X	X					
55	39 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02242	X								
56	39 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02243			X	X					
57	32 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02244			X	X					

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ABN– 50 005 085 521
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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
58	32 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02245			X	X					
59	32 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02246	X								
60	32 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02247			X	X					
61	33 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02248			X	X					
62	33 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02249			X	X					
63	33 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02250			X	X					
64	33 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02251	X								
65	33 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02252			X	X					
66	40 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02253			X	X					
67	40 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02254				X	X				
68	40 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02255			X	X					
69	72 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02256			X	X					

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ABN– 50 005 085 521
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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
70	72 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02257			X	X					
71	61 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02258	X		X	X					
72	61 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02259			X	X					
73	61 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02260			X	X					
74	53 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02261	X		X	X					
75	53 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02262			X	X					
76	53 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02263			X	X					
77	45 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02264	X		X	X					
78	45 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02265			X	X					
79	45 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02266			X	X					
80	DUPLICATE 4	Jul 03, 2017		Soil	M17-Jl02267			X	X					
81	67 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02268			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
82	67 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02269	X		X	X					
83	67 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02270	X								
84	60 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02271			X	X					
85	60 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02272			X	X					
86	60 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02273			X	X					
87	52 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02274			X	X					
88	52 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02275			X	X					
89	52 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02276	X		X	X					
90	52 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02277			X	X					
91	52 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02278			X	X					
92	44 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02279	X								
93	44 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02280	X								

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
94	57 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02281	X		X	X					
95	57 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02282			X	X					
96	57 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02283			X	X					
97	57 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02284			X	X					
98	65 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02285	X		X	X					
99	65 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02286			X	X					
100	65 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02287			X	X					
101	65 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02288	X		X	X					
102	65 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02289			X	X					
103	76 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02290			X	X					
104	75 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02291	X		X	X					
105	75 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02292			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
106	75 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02293				X	X				
107	75 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02294			X	X					
108	75 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02295			X	X					
109	69 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02296	X								
110	69 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02297			X	X					
111	69 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02298			X	X					
112	69 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02299			X	X					
113	69 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02300			X	X					
114	69 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02301			X	X					
115	64 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02302	X								
116	64 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02303			X	X					
117	64 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02304			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

Brisbane
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
118	64 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02305			X	X					
119	56 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02306	X		X	X					
120	56 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02307			X	X					
121	56 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02308			X	X					
122	56 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02309			X	X					
123	48 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02310	X		X	X					
124	48 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02311			X	X					
125	48 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02312			X	X					
126	48 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02314			X	X					
127	DUPLICATE 5	Jul 03, 2017		Soil	M17-Jl02315			X	X					
128	DUPLICATE 6	Jul 03, 2017		Soil	M17-Jl02316			X	X					
129	DUPLICATE 7	Jul 03, 2017		Soil	M17-Jl02317			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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Unit F3, Building F
16 Mars Road
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NATA # 1261 Site # 18217

Brisbane
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
130	43 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02318	X								
131	43 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02319			X	X					
132	43 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02320			X	X					
133	43 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02321			X	X					
134	51 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02322	X								
135	51 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02323			X	X					
136	51 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02324				X				X	
137	51 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02325			X	X					
138	59 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02326	X		X	X					
139	59 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02327			X	X					
140	70 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02328			X	X					
141	70 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02329	X		X	X					

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web : www.eurofins.com.au

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Site # 1254 & 14271

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Eurofins | mgt Analytical Services Manager : Mary Makarios

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
142	70 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02330			X	X					
143	70 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02331			X	X					
144	37 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02332			X	X					
145	37 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02333			X	X					
146	37 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02334			X	X					
147	29 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02335			X	X					
148	29 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02336			X	X					
149	29 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02337			X	X					
150	28 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02338			X	X					
151	28 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02339			X	X					
152	28 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02340			X	X					
153	36 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02341			X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
154	36 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02342			X	X					
155	36 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02343			X	X					
156	36 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02344			X	X					
157	36 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02345			X	X					
158	DUPLICATE 8	Jul 03, 2017		Soil	M17-Jl02346			X	X					
159	35 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02347			X	X					
160	35 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02348			X	X					
161	35 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02349				X					X
162	35 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02350			X	X					
163	35 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02351			X	X					
164	35 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02352			X	X					
165	34 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02353			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
166	41 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02354			X	X					
167	41 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02355			X	X					
168	41 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02356			X	X					
169	49 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02357			X	X					
170	49 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02358			X	X					
171	49 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02359			X	X					
172	42 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02360			X	X					
173	42 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02361			X	X					
174	42 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02362			X	X					
175	50 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02363				X		X			
176	50 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02364			X	X					
177	50 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02365				X					X

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
178	58 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02366			X	X					
179	58 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02367			X	X					
180	58 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02368			X	X					
181	58 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02369				X				X	
182	66 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02370			X	X					
183	80 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02371			X	X					
184	80 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02372			X	X					
185	79 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02373			X	X					
186	79 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02374			X	X					
187	78 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02375			X	X					
188	78 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02376			X	X					
189	71 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02377			X	X					

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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
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16 Mars Road
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NATA # 1261 Site # 18217

Brisbane
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
190	12 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02378			X	X					
191	13 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02379			X	X					
192	13 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02380			X	X					
193	13 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02381				X					X
194	13 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02382			X	X					
195	21 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02383			X	X					
196	21 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02384				X					X
197	22 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02385			X	X					
198	22 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02386			X	X					
199	22 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02387			X	X					
200	20 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02388			X	X					
201	20 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02389			X	X					

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Melbourne
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
202	20 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02390				X					X
203	83 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02391			X	X					
204	83 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02392			X	X					
205	83 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02393			X	X					
206	82 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02394			X	X					
207	82 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02395			X	X					
208	82 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02396				X				X	
209	82 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02397			X	X					
210	81 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02398			X	X					
211	84 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02399			X	X					
212	84 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02400			X	X					
213	85 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02401			X	X					

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Melbourne
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Oakleigh VIC 3166
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
214	85 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02402			X	X					
215	77 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02403			X	X					
216	27 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02404			X	X					
217	19 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02405			X	X					
218	19 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02406			X	X					
219	18 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02407			X	X					
220	18 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02408			X	X					
221	26 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02409			X	X					
222	26 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02410			X	X					
223	14 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02411			X	X					
224	14 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02412			X	X					
225	15 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02413			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
226	15 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02414			X	X					
227	17 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02415			X	X					
228	17 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02416			X	X					
229	25 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02417			X	X					
230	25 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02418			X	X					
231	23 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02419			X	X					
232	23 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02420			X	X					
233	23 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02421				X		X			X
234	16 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02422			X	X					
235	16 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02423			X	X					
236	16 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02424				X				X	
237	16 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02425			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
238	24 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02426			X	X					
239	24 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02427			X	X					
240	24 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02428			X	X					
241	RINSATE	Jul 03, 2017		Water	M17-Jl02564			X						
242	TRIP	Jul 03, 2017		Water	M17-Jl02565		X							
Test Counts						35	1	204	222	2	2	6	4	6

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. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 Advice.

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

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene 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 Aroclor 1260 in Matrix Spikes and LCS.
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 RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Volatile Organics							
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Triazines							
Atrazine	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1.0	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)							
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							
NEPM 2013 Acid Herbicides							
Picloram*	mg/kg	< 0.5			0.5	Pass	
2.4-D	mg/kg	< 0.5			0.5	Pass	
2.4.5-T	mg/kg	< 0.5			0.5	Pass	
MCPA	mg/kg	< 0.5			0.5	Pass	
MCPB	mg/kg	< 0.5			0.5	Pass	
Mecoprop	mg/kg	< 0.5			0.5	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
NEPM 2013 Organochlorine Pesticides							
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
% Clay	%	< 1			1	Pass	
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (free)	mg/kg	< 5			5	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride	mg/kg	< 100			100	Pass	
Total Organic Carbon	%	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Iron	mg/kg	< 20			20	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	80			70-130	Pass	
TRH C10-C14	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	91			70-130	Pass	
m&p-Xylenes	%	90			70-130	Pass	
Xylenes - Total	%	88			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	89			70-130	Pass	
1.1.1-Trichloroethane	%	130			70-130	Pass	
1.2-Dichlorobenzene	%	99			70-130	Pass	
1.2-Dichloroethane	%	96			70-130	Pass	
Benzene	%	98			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
Toluene	%	96			70-130	Pass	
Trichloroethene	%	90			70-130	Pass	
Xylenes - Total	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	112			70-130	Pass	
TRH C6-C10	%	75			70-130	Pass	
TRH >C10-C16	%	77			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	92			70-130	Pass	
Benz(a)anthracene	%	102			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	
Benzo(b&j)fluoranthene	%	92			70-130	Pass	
Benzo(g.h.i)perylene	%	97			70-130	Pass	
Benzo(k)fluoranthene	%	96			70-130	Pass	
Chrysene	%	95			70-130	Pass	
Dibenz(a.h)anthracene	%	97			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	98			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	113			70-130	Pass	
Pyrene	%	96			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
4.4'-DDD	%	115			70-130	Pass	
4.4'-DDE	%	100			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDT	%	73			70-130	Pass	
a-BHC	%	91			70-130	Pass	
Aldrin	%	97			70-130	Pass	
b-BHC	%	92			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	98			70-130	Pass	
Endosulfan I	%	94			70-130	Pass	
Endosulfan II	%	103			70-130	Pass	
Endosulfan sulphate	%	101			70-130	Pass	
Endrin	%	111			70-130	Pass	
Endrin aldehyde	%	97			70-130	Pass	
Endrin ketone	%	95			70-130	Pass	
g-BHC (Lindane)	%	90			70-130	Pass	
Heptachlor	%	95			70-130	Pass	
Heptachlor epoxide	%	94			70-130	Pass	
Hexachlorobenzene	%	88			70-130	Pass	
Methoxychlor	%	124			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	78			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	103			30-130	Pass	
2.4-Dichlorophenol	%	80			30-130	Pass	
2.4.5-Trichlorophenol	%	90			30-130	Pass	
2.4.6-Trichlorophenol	%	105			30-130	Pass	
2.6-Dichlorophenol	%	99			30-130	Pass	
4-Chloro-3-methylphenol	%	102			30-130	Pass	
Pentachlorophenol	%	32			30-130	Pass	
Tetrachlorophenols - Total	%	79			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	41			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	33			30-130	Pass	
2-Methylphenol (o-Cresol)	%	92			30-130	Pass	
2-Nitrophenol	%	86			30-130	Pass	
2.4-Dimethylphenol	%	104			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	96			30-130	Pass	
4-Nitrophenol	%	76			30-130	Pass	
Dinoseb	%	35			30-130	Pass	
Phenol	%	105			30-130	Pass	
LCS - % Recovery							
NEPM 2013 Acid Herbicides							
Picloram*	%	86			70-130	Pass	
2.4-D	%	76			70-130	Pass	
2.4.5-T	%	75			70-130	Pass	
MCPA	%	70			70-130	Pass	
Mecoprop	%	95			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Organochlorine Pesticides							
Endosulfan sulphate	%	101			70-130	Pass	
4.4'-DDD	%	115			70-130	Pass	
4.4'-DDE	%	100			70-130	Pass	
4.4'-DDT	%	73			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	%	97			70-130	Pass	
Dieldrin	%	98			70-130	Pass	
Endosulfan I	%	94			70-130	Pass	
Endosulfan II	%	103			70-130	Pass	
Endrin	%	111			70-130	Pass	
Heptachlor	%	95			70-130	Pass	
Hexachlorobenzene	%	88			70-130	Pass	
Methoxychlor	%	113			70-130	Pass	
LCS - % Recovery							
% Clay	%	100			70-130	Pass	
Chromium (hexavalent)	%	99			70-130	Pass	
Cyanide (total)	%	91			70-130	Pass	
Fluoride	%	106			70-130	Pass	
Total Organic Carbon	%	92			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	84			80-120	Pass	
Arsenic	%	96			80-120	Pass	
Arsenic	%	95			80-120	Pass	
Beryllium	%	93			80-120	Pass	
Boron	%	89			80-120	Pass	
Cadmium	%	90			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	92			80-120	Pass	
Chromium	%	102			80-120	Pass	
Chromium	%	99			80-120	Pass	
Cobalt	%	90			80-120	Pass	
Copper	%	96			80-120	Pass	
Copper	%	101			80-120	Pass	
Copper	%	99			80-120	Pass	
Lead	%	89			80-120	Pass	
Lead	%	101			80-120	Pass	
Lead	%	99			80-120	Pass	
Manganese	%	96			80-120	Pass	
Mercury	%	80			75-125	Pass	
Mercury	%	88			75-125	Pass	
Mercury	%	85			75-125	Pass	
Molybdenum	%	91			80-120	Pass	
Nickel	%	92			80-120	Pass	
Nickel	%	104			80-120	Pass	
Nickel	%	100			80-120	Pass	
Selenium	%	81			80-120	Pass	
Selenium	%	92			80-120	Pass	
Silver	%	99			80-120	Pass	
Tin	%	90			80-120	Pass	
Zinc	%	90			80-120	Pass	
Zinc	%	101			80-120	Pass	
Zinc	%	97			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	B17-JI00945	NCP	%	72			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	B17-JI00945	NCP	%	94			70-130	Pass	
Toluene	B17-JI00945	NCP	%	80			70-130	Pass	
Ethylbenzene	B17-JI00945	NCP	%	109			70-130	Pass	
m&p-Xylenes	B17-JI00945	NCP	%	74			70-130	Pass	
o-Xylene	B17-JI00945	NCP	%	109			70-130	Pass	
Xylenes - Total	B17-JI00945	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	B17-JI00945	NCP	%	116			70-130	Pass	
TRH C6-C10	B17-JI00945	NCP	%	70			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-JI02192	CP	%	91			75-125	Pass	
Beryllium	M17-JI02192	CP	%	99			75-125	Pass	
Boron	M17-JI02192	CP	%	91			75-125	Pass	
Cadmium	M17-JI02192	CP	%	97			75-125	Pass	
Chromium	M17-JI02192	CP	%	89			75-125	Pass	
Cobalt	M17-JI02192	CP	%	88			75-125	Pass	
Copper	M17-JI02192	CP	%	113			75-125	Pass	
Lead	M17-JI02192	CP	%	84			75-125	Pass	
Manganese	M17-JI02192	CP	%	81			75-125	Pass	
Mercury	M17-JI02192	CP	%	87			70-130	Pass	
Molybdenum	M17-JI02192	CP	%	97			75-125	Pass	
Nickel	M17-JI02192	CP	%	89			75-125	Pass	
Selenium	M17-JI02192	CP	%	85			75-125	Pass	
Silver	M17-JI02192	CP	%	101			75-125	Pass	
Tin	M17-JI02192	CP	%	94			75-125	Pass	
Zinc	M17-JI02192	CP	%	86			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M17-JI02199	CP	%	99			70-130	Pass	
Acenaphthylene	M17-JI02199	CP	%	106			70-130	Pass	
Anthracene	M17-JI02199	CP	%	90			70-130	Pass	
Benz(a)anthracene	M17-JI02199	CP	%	113			70-130	Pass	
Benzo(a)pyrene	M17-JI02199	CP	%	116			70-130	Pass	
Benzo(b&j)fluoranthene	M17-JI02199	CP	%	101			70-130	Pass	
Benzo(g.h.i)perylene	M17-JI02199	CP	%	114			70-130	Pass	
Benzo(k)fluoranthene	M17-JI02199	CP	%	109			70-130	Pass	
Chrysene	M17-JI02199	CP	%	100			70-130	Pass	
Dibenz(a.h)anthracene	M17-JI02199	CP	%	125			70-130	Pass	
Fluoranthene	M17-JI02199	CP	%	103			70-130	Pass	
Fluorene	M17-JI02199	CP	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M17-JI02199	CP	%	111			70-130	Pass	
Naphthalene	M17-JI02199	CP	%	98			70-130	Pass	
Phenanthrene	M17-JI02199	CP	%	110			70-130	Pass	
Pyrene	M17-JI02199	CP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M17-JI02199	CP	%	104			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4-Dichlorophenol	M17-Jl02199	CP	%	110			30-130	Pass	
2.4.5-Trichlorophenol	M17-Jl02199	CP	%	102			30-130	Pass	
2.4.6-Trichlorophenol	M17-Jl02199	CP	%	112			30-130	Pass	
2.6-Dichlorophenol	M17-Jl02199	CP	%	114			30-130	Pass	
4-Chloro-3-methylphenol	M17-Jl02199	CP	%	108			30-130	Pass	
Pentachlorophenol	M17-Jl02199	CP	%	56			30-130	Pass	
Tetrachlorophenols - Total	M17-Jl02199	CP	%	104			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M17-Jl02199	CP	%	39			30-130	Pass	
2-Methyl-4.6-dinitrophenol	M17-Jl02199	CP	%	35			30-130	Pass	
2-Methylphenol (o-Cresol)	M17-Jl02199	CP	%	107			30-130	Pass	
2-Nitrophenol	M17-Jl02199	CP	%	101			30-130	Pass	
2.4-Dimethylphenol	M17-Jl02199	CP	%	109			30-130	Pass	
2.4-Dinitrophenol	M17-Jl02199	CP	%	44			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M17-Jl02199	CP	%	103			30-130	Pass	
4-Nitrophenol	M17-Jl02199	CP	%	96			30-130	Pass	
Dinoseb	M17-Jl02199	CP	%	43			30-130	Pass	
Phenol	M17-Jl02199	CP	%	104			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02202	CP	%	86			75-125	Pass	
Beryllium	M17-Jl02202	CP	%	95			75-125	Pass	
Boron	M17-Jl02202	CP	%	91			75-125	Pass	
Cadmium	M17-Jl02202	CP	%	93			75-125	Pass	
Chromium	M17-Jl02202	CP	%	105			75-125	Pass	
Cobalt	M17-Jl02202	CP	%	89			75-125	Pass	
Copper	M17-Jl02202	CP	%	121			75-125	Pass	
Lead	M17-Jl02202	CP	%	112			75-125	Pass	
Manganese	M17-Jl02202	CP	%	144			75-125	Fail	Q08
Mercury	M17-Jl02202	CP	%	157			70-130	Fail	Q08
Molybdenum	M17-Jl02202	CP	%	99			75-125	Pass	
Nickel	M17-Jl02202	CP	%	91			75-125	Pass	
Selenium	M17-Jl02202	CP	%	81			75-125	Pass	
Silver	M17-Jl02202	CP	%	84			75-125	Pass	
Tin	M17-Jl02202	CP	%	76			75-125	Pass	
Zinc	M17-Jl02202	CP	%	176			75-125	Fail	Q08
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02212	CP	%	92			75-125	Pass	
Beryllium	M17-Jl02212	CP	%	99			75-125	Pass	
Boron	M17-Jl02212	CP	%	89			75-125	Pass	
Cadmium	M17-Jl02212	CP	%	96			75-125	Pass	
Chromium	M17-Jl02212	CP	%	96			75-125	Pass	
Cobalt	M17-Jl02212	CP	%	93			75-125	Pass	
Copper	M17-Jl02212	CP	%	106			75-125	Pass	
Lead	M17-Jl02212	CP	%	113			75-125	Pass	
Manganese	M17-Jl02212	CP	%	122			75-125	Pass	
Mercury	M17-Jl02212	CP	%	85			70-130	Pass	
Molybdenum	M17-Jl02212	CP	%	96			75-125	Pass	
Nickel	M17-Jl02212	CP	%	93			75-125	Pass	
Selenium	M17-Jl02212	CP	%	88			75-125	Pass	
Silver	M17-Jl02212	CP	%	98			75-125	Pass	
Tin	M17-Jl02212	CP	%	82			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	M17-Jl02212	CP	%	115			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02226	CP	%	91			75-125	Pass	
Beryllium	M17-Jl02226	CP	%	95			75-125	Pass	
Boron	M17-Jl02226	CP	%	88			75-125	Pass	
Cadmium	M17-Jl02226	CP	%	94			75-125	Pass	
Chromium	M17-Jl02226	CP	%	91			75-125	Pass	
Cobalt	M17-Jl02226	CP	%	88			75-125	Pass	
Copper	M17-Jl02226	CP	%	103			75-125	Pass	
Lead	M17-Jl02226	CP	%	84			75-125	Pass	
Manganese	M17-Jl02226	CP	%	74			75-125	Fail	Q08
Mercury	M17-Jl02226	CP	%	118			70-130	Pass	
Molybdenum	M17-Jl02226	CP	%	93			75-125	Pass	
Nickel	M17-Jl02226	CP	%	89			75-125	Pass	
Selenium	M17-Jl02226	CP	%	84			75-125	Pass	
Silver	M17-Jl02226	CP	%	97			75-125	Pass	
Tin	M17-Jl02226	CP	%	107			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02239	CP	%	92			75-125	Pass	
Beryllium	M17-Jl02239	CP	%	102			75-125	Pass	
Boron	M17-Jl02239	CP	%	92			75-125	Pass	
Cadmium	M17-Jl02239	CP	%	97			75-125	Pass	
Chromium	M17-Jl02239	CP	%	97			75-125	Pass	
Cobalt	M17-Jl02239	CP	%	93			75-125	Pass	
Copper	M17-Jl02239	CP	%	103			75-125	Pass	
Lead	M17-Jl02239	CP	%	92			75-125	Pass	
Manganese	M17-Jl02239	CP	%	95			75-125	Pass	
Mercury	M17-Jl02239	CP	%	93			70-130	Pass	
Molybdenum	M17-Jl02239	CP	%	97			75-125	Pass	
Nickel	M17-Jl02239	CP	%	100			75-125	Pass	
Selenium	M17-Jl02239	CP	%	90			75-125	Pass	
Silver	M17-Jl02239	CP	%	98			75-125	Pass	
Tin	M17-Jl02239	CP	%	97			75-125	Pass	
Zinc	M17-Jl02239	CP	%	90			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02252	CP	%	80			75-125	Pass	
Beryllium	M17-Jl02252	CP	%	97			75-125	Pass	
Boron	M17-Jl02252	CP	%	86			75-125	Pass	
Cadmium	M17-Jl02252	CP	%	93			75-125	Pass	
Chromium	M17-Jl02252	CP	%	91			75-125	Pass	
Cobalt	M17-Jl02252	CP	%	89			75-125	Pass	
Copper	M17-Jl02252	CP	%	100			75-125	Pass	
Lead	M17-Jl02252	CP	%	79			75-125	Pass	
Manganese	M17-Jl02252	CP	%	88			75-125	Pass	
Mercury	M17-Jl02252	CP	%	100			70-130	Pass	
Molybdenum	M17-Jl02252	CP	%	92			75-125	Pass	
Nickel	M17-Jl02252	CP	%	86			75-125	Pass	
Selenium	M17-Jl02252	CP	%	84			75-125	Pass	
Silver	M17-Jl02252	CP	%	87			75-125	Pass	
Tin	M17-Jl02252	CP	%	70			75-125	Fail	Q08
Zinc	M17-Jl02252	CP	%	85			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDD	M17-Jl00347	NCP	%	107			70-130	Pass	
4.4'-DDE	M17-Jl00347	NCP	%	95			70-130	Pass	
4.4'-DDT	M17-Jl00347	NCP	%	94			70-130	Pass	
Aldrin	M17-Jl00347	NCP	%	93			70-130	Pass	
Dieldrin	M17-Jl00347	NCP	%	92			70-130	Pass	
Endosulfan I	M17-Jl00347	NCP	%	89			70-130	Pass	
Endosulfan II	M17-Jl00347	NCP	%	96			70-130	Pass	
Endosulfan sulphate	M17-Jl00347	NCP	%	100			70-130	Pass	
Endrin	M17-Jl00347	NCP	%	112			70-130	Pass	
Heptachlor	M17-Jl00347	NCP	%	95			70-130	Pass	
Hexachlorobenzene	M17-Jl00347	NCP	%	88			70-130	Pass	
Methoxychlor	M17-Jl00347	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M17-Jl00276	NCP	%	93			70-130	Pass	
Spike - % Recovery									
NEPM 2013 Acid Herbicides				Result 1					
Picloram*	M17-Jn24238	NCP	%	84			70-130	Pass	
2.4-D	M17-Jn24238	NCP	%	71			70-130	Pass	
MCPA	M17-Jn24238	NCP	%	int			70-130	Fail	Q08
Spike - % Recovery									
NEPM 2013 Organochlorine Pesticides				Result 1					
Endosulfan sulphate	M17-Jl00347	NCP	%	100			70-130	Pass	
4.4'-DDD	M17-Jl00347	NCP	%	107			70-130	Pass	
4.4'-DDE	M17-Jl00347	NCP	%	95			70-130	Pass	
4.4'-DDT	M17-Jl00347	NCP	%	94			70-130	Pass	
Aldrin	M17-Jl00347	NCP	%	93			70-130	Pass	
Dieldrin	M17-Jl00347	NCP	%	92			70-130	Pass	
Endosulfan I	M17-Jl00347	NCP	%	89			70-130	Pass	
Endosulfan II	M17-Jl00347	NCP	%	96			70-130	Pass	
Endrin	M17-Jl00347	NCP	%	112			70-130	Pass	
Heptachlor	M17-Jl00347	NCP	%	95			70-130	Pass	
Hexachlorobenzene	M17-Jl00347	NCP	%	88			70-130	Pass	
Methoxychlor	M17-Jl00347	NCP	%	75			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M17-Jl02137	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02262	CP	%	95			75-125	Pass	
Beryllium	M17-Jl02262	CP	%	100			75-125	Pass	
Boron	M17-Jl02262	CP	%	82			75-125	Pass	
Cadmium	M17-Jl02262	CP	%	96			75-125	Pass	
Chromium	M17-Jl02262	CP	%	95			75-125	Pass	
Cobalt	M17-Jl02262	CP	%	90			75-125	Pass	
Copper	M17-Jl02262	CP	%	103			75-125	Pass	
Lead	M17-Jl02262	CP	%	82			75-125	Pass	
Manganese	M17-Jl02262	CP	%	85			75-125	Pass	
Mercury	M17-Jl02262	CP	%	98			70-130	Pass	
Molybdenum	M17-Jl02262	CP	%	95			75-125	Pass	
Nickel	M17-Jl02262	CP	%	84			75-125	Pass	
Selenium	M17-Jl02262	CP	%	85			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Silver	M17-Jl02262	CP	%	96			75-125	Pass	
Tin	M17-Jl02262	CP	%	95			75-125	Pass	
Zinc	M17-Jl02262	CP	%	93			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02273	CP	%	106			75-125	Pass	
Beryllium	M17-Jl02273	CP	%	97			75-125	Pass	
Boron	M17-Jl02273	CP	%	85			75-125	Pass	
Cadmium	M17-Jl02273	CP	%	93			75-125	Pass	
Chromium	M17-Jl02273	CP	%	99			75-125	Pass	
Cobalt	M17-Jl02273	CP	%	92			75-125	Pass	
Copper	M17-Jl02273	CP	%	103			75-125	Pass	
Lead	M17-Jl02273	CP	%	105			75-125	Pass	
Manganese	M17-Jl02273	CP	%	111			75-125	Pass	
Mercury	M17-Jl02273	CP	%	88			70-130	Pass	
Molybdenum	M17-Jl02273	CP	%	94			75-125	Pass	
Nickel	M17-Jl02273	CP	%	93			75-125	Pass	
Selenium	M17-Jl02273	CP	%	88			75-125	Pass	
Silver	M17-Jl02273	CP	%	94			75-125	Pass	
Tin	M17-Jl02273	CP	%	95			75-125	Pass	
Zinc	M17-Jl02273	CP	%	97			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02285	CP	%	96			75-125	Pass	
Beryllium	M17-Jl02285	CP	%	104			75-125	Pass	
Boron	M17-Jl02285	CP	%	88			75-125	Pass	
Cadmium	M17-Jl02285	CP	%	98			75-125	Pass	
Chromium	M17-Jl02285	CP	%	100			75-125	Pass	
Cobalt	M17-Jl02285	CP	%	97			75-125	Pass	
Copper	M17-Jl02285	CP	%	55			75-125	Fail	Q08
Lead	M17-Jl02285	CP	%	119			75-125	Pass	
Manganese	M17-Jl02285	CP	%	115			75-125	Pass	
Mercury	M17-Jl02285	CP	%	89			70-130	Pass	
Molybdenum	M17-Jl02285	CP	%	99			75-125	Pass	
Nickel	M17-Jl02285	CP	%	104			75-125	Pass	
Selenium	M17-Jl02285	CP	%	96			75-125	Pass	
Silver	M17-Jl02285	CP	%	97			75-125	Pass	
Tin	M17-Jl02285	CP	%	97			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02295	CP	%	91			75-125	Pass	
Beryllium	M17-Jl02295	CP	%	99			75-125	Pass	
Boron	M17-Jl02295	CP	%	88			75-125	Pass	
Cadmium	M17-Jl02295	CP	%	98			75-125	Pass	
Chromium	M17-Jl02295	CP	%	98			75-125	Pass	
Cobalt	M17-Jl02295	CP	%	95			75-125	Pass	
Copper	M17-Jl02295	CP	%	86			75-125	Pass	
Lead	M17-Jl02295	CP	%	93			75-125	Pass	
Manganese	M17-Jl02295	CP	%	102			75-125	Pass	
Mercury	M17-Jl02295	CP	%	90			70-130	Pass	
Molybdenum	M17-Jl02295	CP	%	97			75-125	Pass	
Nickel	M17-Jl02295	CP	%	96			75-125	Pass	
Selenium	M17-Jl02295	CP	%	85			75-125	Pass	
Silver	M17-Jl02295	CP	%	109			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tin	M17-Jl02295	CP	%	89			75-125	Pass	
Zinc	M17-Jl02295	CP	%	103			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02307	CP	%	86			75-125	Pass	
Beryllium	M17-Jl02307	CP	%	93			75-125	Pass	
Boron	M17-Jl02307	CP	%	86			75-125	Pass	
Cadmium	M17-Jl02307	CP	%	94			75-125	Pass	
Chromium	M17-Jl02307	CP	%	91			75-125	Pass	
Cobalt	M17-Jl02307	CP	%	85			75-125	Pass	
Copper	M17-Jl02307	CP	%	93			75-125	Pass	
Lead	M17-Jl02307	CP	%	90			75-125	Pass	
Mercury	M17-Jl02307	CP	%	95			70-130	Pass	
Molybdenum	M17-Jl02307	CP	%	91			75-125	Pass	
Nickel	M17-Jl02307	CP	%	89			75-125	Pass	
Selenium	M17-Jl02307	CP	%	85			75-125	Pass	
Silver	M17-Jl02307	CP	%	121			75-125	Pass	
Tin	M17-Jl02307	CP	%	84			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02319	CP	%	97			75-125	Pass	
Beryllium	M17-Jl02319	CP	%	107			75-125	Pass	
Boron	M17-Jl02319	CP	%	93			75-125	Pass	
Cadmium	M17-Jl02319	CP	%	100			75-125	Pass	
Chromium	M17-Jl02319	CP	%	102			75-125	Pass	
Cobalt	M17-Jl02319	CP	%	100			75-125	Pass	
Copper	M17-Jl02319	CP	%	108			75-125	Pass	
Lead	M17-Jl02319	CP	%	114			75-125	Pass	
Manganese	M17-Jl02319	CP	%	101			75-125	Pass	
Mercury	M17-Jl02319	CP	%	86			70-130	Pass	
Molybdenum	M17-Jl02319	CP	%	102			75-125	Pass	
Nickel	M17-Jl02319	CP	%	102			75-125	Pass	
Selenium	M17-Jl02319	CP	%	96			75-125	Pass	
Silver	M17-Jl02319	CP	%	98			75-125	Pass	
Tin	M17-Jl02319	CP	%	102			75-125	Pass	
Zinc	M17-Jl02319	CP	%	105			75-125	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M17-Jl02140	NCP	%	75			70-130	Pass	
1.1.1-Trichloroethane	M17-Jl02140	NCP	%	99			70-130	Pass	
1.2-Dichlorobenzene	M17-Jl02140	NCP	%	113			70-130	Pass	
1.2-Dichloroethane	M17-Jl02140	NCP	%	101			70-130	Pass	
Trichloroethene	M17-Jl02140	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
a-BHC	M17-Jl00347	NCP	%	89			70-130	Pass	
b-BHC	M17-Jl00347	NCP	%	84			70-130	Pass	
d-BHC	M17-Jl00347	NCP	%	97			70-130	Pass	
Endrin aldehyde	M17-Jl00347	NCP	%	93			70-130	Pass	
Endrin ketone	M17-Jl00347	NCP	%	98			70-130	Pass	
g-BHC (Lindane)	M17-Jl00347	NCP	%	87			70-130	Pass	
Heptachlor epoxide	M17-Jl00347	NCP	%	89			70-130	Pass	
Spike - % Recovery									
				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cyanide (total)	M17-Jl03679	NCP	%	27			70-130	Fail	Q08
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02330	CP	%	77			75-125	Pass	
Beryllium	M17-Jl02330	CP	%	106			75-125	Pass	
Boron	M17-Jl02330	CP	%	92			75-125	Pass	
Cadmium	M17-Jl02330	CP	%	101			75-125	Pass	
Chromium	M17-Jl02330	CP	%	98			75-125	Pass	
Cobalt	M17-Jl02330	CP	%	99			75-125	Pass	
Copper	M17-Jl02330	CP	%	108			75-125	Pass	
Lead	M17-Jl02330	CP	%	94			75-125	Pass	
Manganese	M17-Jl02330	CP	%	101			75-125	Pass	
Mercury	M17-Jl02330	CP	%	99			70-130	Pass	
Molybdenum	M17-Jl02330	CP	%	100			75-125	Pass	
Nickel	M17-Jl02330	CP	%	102			75-125	Pass	
Selenium	M17-Jl02330	CP	%	97			75-125	Pass	
Silver	M17-Jl02330	CP	%	99			75-125	Pass	
Tin	M17-Jl02330	CP	%	107			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02340	CP	%	91			75-125	Pass	
Beryllium	M17-Jl02340	CP	%	108			75-125	Pass	
Boron	M17-Jl02340	CP	%	91			75-125	Pass	
Cadmium	M17-Jl02340	CP	%	101			75-125	Pass	
Chromium	M17-Jl02340	CP	%	105			75-125	Pass	
Cobalt	M17-Jl02340	CP	%	100			75-125	Pass	
Copper	M17-Jl02340	CP	%	106			75-125	Pass	
Lead	M17-Jl02340	CP	%	101			75-125	Pass	
Manganese	M17-Jl02340	CP	%	101			75-125	Pass	
Mercury	M17-Jl02340	CP	%	92			70-130	Pass	
Molybdenum	M17-Jl02340	CP	%	102			75-125	Pass	
Nickel	M17-Jl02340	CP	%	104			75-125	Pass	
Selenium	M17-Jl02340	CP	%	92			75-125	Pass	
Silver	M17-Jl02340	CP	%	97			75-125	Pass	
Tin	M17-Jl02340	CP	%	100			75-125	Pass	
Zinc	M17-Jl02340	CP	%	103			75-125	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M17-Jl03673	NCP	%	31			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02351	CP	%	91			75-125	Pass	
Beryllium	M17-Jl02351	CP	%	108			75-125	Pass	
Boron	M17-Jl02351	CP	%	96			75-125	Pass	
Cadmium	M17-Jl02351	CP	%	99			75-125	Pass	
Chromium	M17-Jl02351	CP	%	102			75-125	Pass	
Cobalt	M17-Jl02351	CP	%	101			75-125	Pass	
Copper	M17-Jl02351	CP	%	105			75-125	Pass	
Lead	M17-Jl02351	CP	%	100			75-125	Pass	
Manganese	M17-Jl02351	CP	%	102			75-125	Pass	
Mercury	M17-Jl02351	CP	%	106			70-130	Pass	
Molybdenum	M17-Jl02351	CP	%	102			75-125	Pass	
Nickel	M17-Jl02351	CP	%	102			75-125	Pass	
Selenium	M17-Jl02351	CP	%	94			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Silver	M17-Jl02351	CP	%	88			75-125	Pass	
Tin	M17-Jl02351	CP	%	101			75-125	Pass	
Zinc	M17-Jl02351	CP	%	100			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02361	CP	%	94			75-125	Pass	
Beryllium	M17-Jl02361	CP	%	110			75-125	Pass	
Boron	M17-Jl02361	CP	%	96			75-125	Pass	
Cadmium	M17-Jl02361	CP	%	101			75-125	Pass	
Chromium	M17-Jl02361	CP	%	103			75-125	Pass	
Cobalt	M17-Jl02361	CP	%	102			75-125	Pass	
Copper	M17-Jl02361	CP	%	108			75-125	Pass	
Lead	M17-Jl02361	CP	%	102			75-125	Pass	
Manganese	M17-Jl02361	CP	%	101			75-125	Pass	
Mercury	M17-Jl02361	CP	%	88			70-130	Pass	
Molybdenum	M17-Jl02361	CP	%	103			75-125	Pass	
Nickel	M17-Jl02361	CP	%	104			75-125	Pass	
Selenium	M17-Jl02361	CP	%	95			75-125	Pass	
Silver	M17-Jl02361	CP	%	99			75-125	Pass	
Tin	M17-Jl02361	CP	%	104			75-125	Pass	
Zinc	M17-Jl02361	CP	%	100			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M17-Jl02369	CP	%	121			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M17-Jl02369	CP	%	124			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02372	CP	%	109			75-125	Pass	
Beryllium	M17-Jl02372	CP	%	107			75-125	Pass	
Boron	M17-Jl02372	CP	%	93			75-125	Pass	
Cadmium	M17-Jl02372	CP	%	102			75-125	Pass	
Chromium	M17-Jl02372	CP	%	104			75-125	Pass	
Cobalt	M17-Jl02372	CP	%	99			75-125	Pass	
Copper	M17-Jl02372	CP	%	110			75-125	Pass	
Lead	M17-Jl02372	CP	%	173			75-125	Fail	Q08
Manganese	M17-Jl02372	CP	%	69			75-125	Fail	Q08
Mercury	M17-Jl02372	CP	%	89			70-130	Pass	
Molybdenum	M17-Jl02372	CP	%	103			75-125	Pass	
Nickel	M17-Jl02372	CP	%	99			75-125	Pass	
Selenium	M17-Jl02372	CP	%	99			75-125	Pass	
Silver	M17-Jl02372	CP	%	90			75-125	Pass	
Tin	M17-Jl02372	CP	%	113			75-125	Pass	
Zinc	M17-Jl02372	CP	%	82			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M17-Jl02381	CP	%	96			70-130	Pass	
Acenaphthylene	M17-Jl02381	CP	%	102			70-130	Pass	
Anthracene	M17-Jl02381	CP	%	93			70-130	Pass	
Benz(a)anthracene	M17-Jl02381	CP	%	109			70-130	Pass	
Benzo(a)pyrene	M17-Jl02381	CP	%	111			70-130	Pass	
Benzo(b&j)fluoranthene	M17-Jl02381	CP	%	102			70-130	Pass	
Benzo(g.h.i)perylene	M17-Jl02381	CP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	M17-Jl02381	CP	%	113			70-130	Pass	
Chrysene	M17-Jl02381	CP	%	99			70-130	Pass	
Dibenz(a.h)anthracene	M17-Jl02381	CP	%	127			70-130	Pass	
Fluoranthene	M17-Jl02381	CP	%	99			70-130	Pass	
Fluorene	M17-Jl02381	CP	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M17-Jl02381	CP	%	93			70-130	Pass	
Naphthalene	M17-Jl02381	CP	%	95			70-130	Pass	
Phenanthrene	M17-Jl02381	CP	%	110			70-130	Pass	
Pyrene	M17-Jl02381	CP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M17-Jl02381	CP	%	100			30-130	Pass	
2.4-Dichlorophenol	M17-Jl02381	CP	%	104			30-130	Pass	
2.4.5-Trichlorophenol	M17-Jl02381	CP	%	102			30-130	Pass	
2.4.6-Trichlorophenol	M17-Jl02381	CP	%	108			30-130	Pass	
2.6-Dichlorophenol	M17-Jl02381	CP	%	111			30-130	Pass	
4-Chloro-3-methylphenol	M17-Jl02381	CP	%	101			30-130	Pass	
Pentachlorophenol	M17-Jl02381	CP	%	73			30-130	Pass	
Tetrachlorophenols - Total	M17-Jl02381	CP	%	107			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methyl-4.6-dinitrophenol	M17-Jl02381	CP	%	37			30-130	Pass	
2-Methylphenol (o-Cresol)	M17-Jl02381	CP	%	101			30-130	Pass	
2-Nitrophenol	M17-Jl02381	CP	%	92			30-130	Pass	
2.4-Dimethylphenol	M17-Jl02381	CP	%	100			30-130	Pass	
2.4-Dinitrophenol	M17-Jl02381	CP	%	40			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M17-Jl02381	CP	%	101			30-130	Pass	
4-Nitrophenol	M17-Jl02381	CP	%	85			30-130	Pass	
Dinoseb	M17-Jl02381	CP	%	43			30-130	Pass	
Phenol	M17-Jl02381	CP	%	99			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02383	CP	%	99			75-125	Pass	
Beryllium	M17-Jl02383	CP	%	105			75-125	Pass	
Boron	M17-Jl02383	CP	%	93			75-125	Pass	
Cadmium	M17-Jl02383	CP	%	100			75-125	Pass	
Chromium	M17-Jl02383	CP	%	106			75-125	Pass	
Cobalt	M17-Jl02383	CP	%	94			75-125	Pass	
Copper	M17-Jl02383	CP	%	108			75-125	Pass	
Lead	M17-Jl02383	CP	%	87			75-125	Pass	
Mercury	M17-Jl02383	CP	%	90			70-130	Pass	
Molybdenum	M17-Jl02383	CP	%	99			75-125	Pass	
Nickel	M17-Jl02383	CP	%	106			75-125	Pass	
Selenium	M17-Jl02383	CP	%	101			75-125	Pass	
Silver	M17-Jl02383	CP	%	100			75-125	Pass	
Tin	M17-Jl02383	CP	%	98			75-125	Pass	
Zinc	M17-Jl02383	CP	%	85			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02395	CP	%	96			75-125	Pass	
Beryllium	M17-Jl02395	CP	%	106			75-125	Pass	
Boron	M17-Jl02395	CP	%	89			75-125	Pass	
Cadmium	M17-Jl02395	CP	%	102			75-125	Pass	
Chromium	M17-Jl02395	CP	%	96			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cobalt	M17-Jl02395	CP	%	96			75-125	Pass	
Copper	M17-Jl02395	CP	%	105			75-125	Pass	
Lead	M17-Jl02395	CP	%	96			75-125	Pass	
Manganese	M17-Jl02395	CP	%	62			75-125	Fail	Q08
Mercury	M17-Jl02395	CP	%	86			70-130	Pass	
Molybdenum	M17-Jl02395	CP	%	99			75-125	Pass	
Nickel	M17-Jl02395	CP	%	89			75-125	Pass	
Selenium	M17-Jl02395	CP	%	96			75-125	Pass	
Silver	M17-Jl02395	CP	%	103			75-125	Pass	
Tin	M17-Jl02395	CP	%	91			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02405	CP	%	91			75-125	Pass	
Beryllium	M17-Jl02405	CP	%	107			75-125	Pass	
Boron	M17-Jl02405	CP	%	93			75-125	Pass	
Cadmium	M17-Jl02405	CP	%	99			75-125	Pass	
Chromium	M17-Jl02405	CP	%	102			75-125	Pass	
Cobalt	M17-Jl02405	CP	%	101			75-125	Pass	
Copper	M17-Jl02405	CP	%	106			75-125	Pass	
Lead	M17-Jl02405	CP	%	101			75-125	Pass	
Manganese	M17-Jl02405	CP	%	102			75-125	Pass	
Mercury	M17-Jl02405	CP	%	93			70-130	Pass	
Molybdenum	M17-Jl02405	CP	%	101			75-125	Pass	
Nickel	M17-Jl02405	CP	%	103			75-125	Pass	
Selenium	M17-Jl02405	CP	%	93			75-125	Pass	
Silver	M17-Jl02405	CP	%	97			75-125	Pass	
Tin	M17-Jl02405	CP	%	101			75-125	Pass	
Zinc	M17-Jl02405	CP	%	98			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02415	CP	%	104			75-125	Pass	
Beryllium	M17-Jl02415	CP	%	104			75-125	Pass	
Boron	M17-Jl02415	CP	%	89			75-125	Pass	
Cadmium	M17-Jl02415	CP	%	99			75-125	Pass	
Chromium	M17-Jl02415	CP	%	101			75-125	Pass	
Cobalt	M17-Jl02415	CP	%	95			75-125	Pass	
Copper	M17-Jl02415	CP	%	118			75-125	Pass	
Lead	M17-Jl02415	CP	%	108			75-125	Pass	
Mercury	M17-Jl02415	CP	%	94			70-130	Pass	
Molybdenum	M17-Jl02415	CP	%	98			75-125	Pass	
Nickel	M17-Jl02415	CP	%	100			75-125	Pass	
Selenium	M17-Jl02415	CP	%	99			75-125	Pass	
Silver	M17-Jl02415	CP	%	100			75-125	Pass	
Tin	M17-Jl02415	CP	%	97			75-125	Pass	
Zinc	M17-Jl02415	CP	%	113			75-125	Pass	
Spike - % Recovery									
				Result 1					
Fluoride	M17-Jl02424	CP	%	105			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl02425	CP	%	93			75-125	Pass	
Beryllium	M17-Jl02425	CP	%	113			75-125	Pass	
Boron	M17-Jl02425	CP	%	94			75-125	Pass	
Cadmium	M17-Jl02425	CP	%	102			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	M17-Jl02425	CP	%	108			75-125	Pass	
Cobalt	M17-Jl02425	CP	%	99			75-125	Pass	
Copper	M17-Jl02425	CP	%	111			75-125	Pass	
Lead	M17-Jl02425	CP	%	101			75-125	Pass	
Manganese	M17-Jl02425	CP	%	93			75-125	Pass	
Mercury	M17-Jl02425	CP	%	95			70-130	Pass	
Molybdenum	M17-Jl02425	CP	%	99			75-125	Pass	
Nickel	M17-Jl02425	CP	%	101			75-125	Pass	
Selenium	M17-Jl02425	CP	%	96			75-125	Pass	
Silver	M17-Jl02425	CP	%	97			75-125	Pass	
Tin	M17-Jl02425	CP	%	99			75-125	Pass	
Zinc	M17-Jl02425	CP	%	100			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02191	CP	mg/kg	14	13	9.0	30%	Pass	
Beryllium	M17-Jl02191	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02191	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02191	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02191	CP	mg/kg	34	33	1.0	30%	Pass	
Cobalt	M17-Jl02191	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02191	CP	mg/kg	12	13	10	30%	Pass	
Lead	M17-Jl02191	CP	mg/kg	34	32	7.0	30%	Pass	
Manganese	M17-Jl02191	CP	mg/kg	51	45	13	30%	Pass	
Mercury	M17-Jl02191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02191	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02191	CP	mg/kg	13	13	1.0	30%	Pass	
Selenium	M17-Jl02191	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02191	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02191	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02191	CP	mg/kg	59	51	14	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02192	CP	mg/kg	3.9	3.3	18	30%	Pass	
Beryllium	M17-Jl02192	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02192	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02192	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02192	CP	mg/kg	24	24	1.0	30%	Pass	
Cobalt	M17-Jl02192	CP	mg/kg	7.4	7.6	2.0	30%	Pass	
Copper	M17-Jl02192	CP	mg/kg	19	19	<1	30%	Pass	
Lead	M17-Jl02192	CP	mg/kg	20	20	1.0	30%	Pass	
Manganese	M17-Jl02192	CP	mg/kg	190	190	4.0	30%	Pass	
Mercury	M17-Jl02192	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02192	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02192	CP	mg/kg	32	33	2.0	30%	Pass	
Selenium	M17-Jl02192	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02192	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02192	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02192	CP	mg/kg	36	37	4.0	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M17-Jl02195	CP	mg/kg	1.1	1.1	1.0	30%	Pass	
Benzo(a)pyrene	M17-Jl02195	CP	mg/kg	1.3	1.2	11	30%	Pass	
Benzo(b&j)fluoranthene	M17-Jl02195	CP	mg/kg	1.1	1.3	17	30%	Pass	
Benzo(g.h.i)perylene	M17-Jl02195	CP	mg/kg	1.2	1.0	21	30%	Pass	
Benzo(k)fluoranthene	M17-Jl02195	CP	mg/kg	1.2	1.0	23	30%	Pass	
Chrysene	M17-Jl02195	CP	mg/kg	1.3	1.3	7.0	30%	Pass	
Dibenz(a.h)anthracene	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M17-Jl02195	CP	mg/kg	1.9	2.1	9.0	30%	Pass	
Fluorene	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M17-Jl02195	CP	mg/kg	0.8	0.7	14	30%	Pass	
Naphthalene	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M17-Jl02195	CP	mg/kg	1.0	1.3	34	30%	Fail	Q15
Pyrene	M17-Jl02195	CP	mg/kg	1.9	2.1	5.0	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M17-Jl02195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M17-Jl02195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M17-Jl02195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M17-Jl02195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M17-Jl02195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M17-Jl02195	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M17-Jl02195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M17-Jl02195	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	M17-Jl02195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M17-Jl02195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M17-Jl02195	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M17-Jl02195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M17-Jl02195	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M17-Jl02195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02198	CP	%	8.4	8.8	5.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M17-Jl02201	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02202	CP	mg/kg	6.6	7.1	7.0	30%	Pass	
Beryllium	M17-Jl02202	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02202	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02202	CP	mg/kg	0.6	0.6	<1	30%	Pass	
Chromium	M17-Jl02202	CP	mg/kg	19	19	1.0	30%	Pass	
Cobalt	M17-Jl02202	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02202	CP	mg/kg	27	27	<1	30%	Pass	
Lead	M17-Jl02202	CP	mg/kg	68	69	1.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Manganese	M17-Jl02202	CP	mg/kg	76	74	3.0	30%	Pass	
Mercury	M17-Jl02202	CP	mg/kg	2.6	2.2	17	30%	Pass	
Molybdenum	M17-Jl02202	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02202	CP	mg/kg	15	15	1.0	30%	Pass	
Selenium	M17-Jl02202	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02202	CP	mg/kg	0.8	0.8	2.0	30%	Pass	
Tin	M17-Jl02202	CP	mg/kg	13	13	2.0	30%	Pass	
Zinc	M17-Jl02202	CP	mg/kg	110	110	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02208	CP	%	11	11	5.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02211	CP	mg/kg	5.2	4.7	11	30%	Pass	
Beryllium	M17-Jl02211	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02211	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02211	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02211	CP	mg/kg	13	11	13	30%	Pass	
Cobalt	M17-Jl02211	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02211	CP	mg/kg	29	24	17	30%	Pass	
Lead	M17-Jl02211	CP	mg/kg	140	130	5.0	30%	Pass	
Manganese	M17-Jl02211	CP	mg/kg	79	68	15	30%	Pass	
Mercury	M17-Jl02211	CP	mg/kg	0.1	0.1	13	30%	Pass	
Molybdenum	M17-Jl02211	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02211	CP	mg/kg	12	11	11	30%	Pass	
Selenium	M17-Jl02211	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02211	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02211	CP	mg/kg	17	16	9.0	30%	Pass	
Zinc	M17-Jl02211	CP	mg/kg	200	170	17	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02212	CP	mg/kg	4.0	3.8	4.0	30%	Pass	
Beryllium	M17-Jl02212	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02212	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02212	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02212	CP	mg/kg	7.6	7.7	1.0	30%	Pass	
Cobalt	M17-Jl02212	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02212	CP	mg/kg	13	13	1.0	30%	Pass	
Lead	M17-Jl02212	CP	mg/kg	53	53	1.0	30%	Pass	
Manganese	M17-Jl02212	CP	mg/kg	47	46	1.0	30%	Pass	
Mercury	M17-Jl02212	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02212	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02212	CP	mg/kg	10	10	1.0	30%	Pass	
Selenium	M17-Jl02212	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02212	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02212	CP	mg/kg	26	26	<1	30%	Pass	
Zinc	M17-Jl02212	CP	mg/kg	64	64	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02220	CP	%	12	14	11	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M17-Jl02224	CP	mg/kg	< 0.1	0.1	32	30%	Fail	Q15

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02226	CP	mg/kg	4.7	4.5	5.0	30%	Pass	
Beryllium	M17-Jl02226	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02226	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02226	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02226	CP	mg/kg	10	10	<1	30%	Pass	
Cobalt	M17-Jl02226	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02226	CP	mg/kg	14	14	<1	30%	Pass	
Lead	M17-Jl02226	CP	mg/kg	39	39	<1	30%	Pass	
Manganese	M17-Jl02226	CP	mg/kg	100	100	1.0	30%	Pass	
Mercury	M17-Jl02226	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02226	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02226	CP	mg/kg	15	15	<1	30%	Pass	
Selenium	M17-Jl02226	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02226	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02226	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02234	CP	%	5.7	5.7	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02239	CP	mg/kg	2.1	2.4	15	30%	Pass	
Beryllium	M17-Jl02239	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02239	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02239	CP	mg/kg	0.8	0.8	<1	30%	Pass	
Chromium	M17-Jl02239	CP	mg/kg	8.1	8.1	<1	30%	Pass	
Cobalt	M17-Jl02239	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02239	CP	mg/kg	7.7	7.8	1.0	30%	Pass	
Lead	M17-Jl02239	CP	mg/kg	23	24	2.0	30%	Pass	
Manganese	M17-Jl02239	CP	mg/kg	33	33	<1	30%	Pass	
Mercury	M17-Jl02239	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02239	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02239	CP	mg/kg	5.9	6.0	1.0	30%	Pass	
Selenium	M17-Jl02239	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02239	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02239	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02239	CP	mg/kg	65	65	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02247	CP	%	12	11	10	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02250	CP	mg/kg	4.3	4.5	5.0	30%	Pass	
Beryllium	M17-Jl02250	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02250	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02250	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02250	CP	mg/kg	8.6	10	17	30%	Pass	
Cobalt	M17-Jl02250	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02250	CP	mg/kg	12	13	11	30%	Pass	
Lead	M17-Jl02250	CP	mg/kg	40	49	18	30%	Pass	
Manganese	M17-Jl02250	CP	mg/kg	48	49	2.0	30%	Pass	
Molybdenum	M17-Jl02250	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02250	CP	mg/kg	9.3	7.7	19	30%	Pass	
Selenium	M17-Jl02250	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02250	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Tin	M17-Jl02250	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02250	CP	mg/kg	50	46	9.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02252	CP	mg/kg	9.6	9.3	3.0	30%	Pass	
Beryllium	M17-Jl02252	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02252	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02252	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02252	CP	mg/kg	14	14	<1	30%	Pass	
Cobalt	M17-Jl02252	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02252	CP	mg/kg	15	15	1.0	30%	Pass	
Lead	M17-Jl02252	CP	mg/kg	44	44	1.0	30%	Pass	
Manganese	M17-Jl02252	CP	mg/kg	92	91	1.0	30%	Pass	
Molybdenum	M17-Jl02252	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02252	CP	mg/kg	18	18	<1	30%	Pass	
Selenium	M17-Jl02252	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02252	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02252	CP	mg/kg	24	24	<1	30%	Pass	
Zinc	M17-Jl02252	CP	mg/kg	53	53	1.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M17-Jl01218	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Chlorpyrifos	M17-Jl03715	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M17-Jl01218	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Atrazine	M17-Jl03715	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
Pentachlorophenol	B17-Jl04812	NCP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	B17-Jl04812	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B17-Jl04812	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Phenol	B17-Jl04812	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
NEPM 2013 Acid Herbicides				Result 1	Result 2	RPD			
Picloram*	M17-Jl05364	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-D	M17-Jl05364	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-T	M17-Jl00100	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
MCPA	M17-Jl05364	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
MCPB	M17-Jl00100	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Mecoprop	M17-Jl00100	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan sulphate	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
4.4'-DDD	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
4.4'-DDE	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
4.4'-DDT	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Aldrin	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Chlordanes - Total	M17-Jl01218	NCP	mg/kg	< 0.1	**	<1	30%	Pass	
Dieldrin	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Endosulfan I	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Endosulfan II	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Endrin	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Heptachlor	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Hexachlorobenzene	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Methoxychlor	M17-Jl01218	NCP	mg/kg	< 0.05	**	<1	30%	Pass	
Toxaphene	M17-Jl01218	NCP	mg/kg	< 1	**	<1	30%	Pass	
Duplicate									
NEPM 2013 Phenols				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	B17-Jl04812	NCP	mg/kg	< 0.2	**	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B17-Jl04812	NCP	mg/kg	< 0.4	**	<1	30%	Pass	
Pentachlorophenol	B17-Jl04812	NCP	mg/kg	< 1	**	<1	30%	Pass	
Phenol	B17-Jl04812	NCP	mg/kg	< 0.5	**	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M17-Jl04338	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	M17-Jl02254	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02258	CP	%	13	12	4.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02261	CP	mg/kg	3.9	3.5	12	30%	Pass	
Beryllium	M17-Jl02261	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02261	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02261	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02261	CP	mg/kg	6.6	6.9	4.0	30%	Pass	
Cobalt	M17-Jl02261	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02261	CP	mg/kg	11	11	1.0	30%	Pass	
Lead	M17-Jl02261	CP	mg/kg	34	31	10	30%	Pass	
Manganese	M17-Jl02261	CP	mg/kg	44	40	10	30%	Pass	
Molybdenum	M17-Jl02261	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02261	CP	mg/kg	7.8	7.5	5.0	30%	Pass	
Selenium	M17-Jl02261	CP	mg/kg	< 2	< 2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Silver	M17-Jl02261	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02261	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02261	CP	mg/kg	49	50	4.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02262	CP	mg/kg	4.7	5.0	6.0	30%	Pass	
Beryllium	M17-Jl02262	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02262	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02262	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02262	CP	mg/kg	13	13	3.0	30%	Pass	
Cobalt	M17-Jl02262	CP	mg/kg	< 5	5.0	3.0	30%	Pass	
Copper	M17-Jl02262	CP	mg/kg	18	18	1.0	30%	Pass	
Lead	M17-Jl02262	CP	mg/kg	97	99	3.0	30%	Pass	
Manganese	M17-Jl02262	CP	mg/kg	85	84	<1	30%	Pass	
Mercury	M17-Jl02262	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02262	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02262	CP	mg/kg	19	20	3.0	30%	Pass	
Selenium	M17-Jl02262	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02262	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02262	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02262	CP	mg/kg	55	55	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02268	CP	%	8.1	8.5	5.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02272	CP	mg/kg	2.5	2.5	3.0	30%	Pass	
Beryllium	M17-Jl02272	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02272	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02272	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02272	CP	mg/kg	9.8	10.0	2.0	30%	Pass	
Cobalt	M17-Jl02272	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02272	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02272	CP	mg/kg	8.5	9.7	13	30%	Pass	
Manganese	M17-Jl02272	CP	mg/kg	11	11	2.0	30%	Pass	
Mercury	M17-Jl02272	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02272	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02272	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02272	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02272	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02272	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02272	CP	mg/kg	7.6	9.0	17	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02273	CP	mg/kg	5.7	5.8	2.0	30%	Pass	
Beryllium	M17-Jl02273	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02273	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02273	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02273	CP	mg/kg	8.8	8.9	1.0	30%	Pass	
Cobalt	M17-Jl02273	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02273	CP	mg/kg	9.5	9.7	2.0	30%	Pass	
Lead	M17-Jl02273	CP	mg/kg	29	29	<1	30%	Pass	
Manganese	M17-Jl02273	CP	mg/kg	33	33	<1	30%	Pass	
Mercury	M17-Jl02273	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Molybdenum	M17-Jl02273	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02273	CP	mg/kg	8.1	8.3	2.0	30%	Pass	
Selenium	M17-Jl02273	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02273	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02273	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02273	CP	mg/kg	41	40	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02281	CP	%	8.9	9.5	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02285	CP	mg/kg	4.5	4.5	<1	30%	Pass	
Beryllium	M17-Jl02285	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02285	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02285	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02285	CP	mg/kg	9.5	9.6	1.0	30%	Pass	
Cobalt	M17-Jl02285	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02285	CP	mg/kg	47	47	1.0	30%	Pass	
Lead	M17-Jl02285	CP	mg/kg	73	73	<1	30%	Pass	
Manganese	M17-Jl02285	CP	mg/kg	50	50	1.0	30%	Pass	
Mercury	M17-Jl02285	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02285	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02285	CP	mg/kg	7.4	7.4	<1	30%	Pass	
Selenium	M17-Jl02285	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02285	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02285	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02285	CP	mg/kg	170	170	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02291	CP	%	7.7	6.5	18	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02295	CP	mg/kg	2.5	2.4	6.0	30%	Pass	
Beryllium	M17-Jl02295	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02295	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02295	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02295	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02295	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02295	CP	mg/kg	14	14	3.0	30%	Pass	
Lead	M17-Jl02295	CP	mg/kg	28	28	<1	30%	Pass	
Manganese	M17-Jl02295	CP	mg/kg	18	19	1.0	30%	Pass	
Mercury	M17-Jl02295	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02295	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02295	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02295	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02295	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02295	CP	mg/kg	13	13	1.0	30%	Pass	
Zinc	M17-Jl02295	CP	mg/kg	49	49	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02303	CP	%	7.2	7.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M17-Jl02306	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02307	CP	mg/kg	2.3	2.3	1.0	30%	Pass	
Beryllium	M17-Jl02307	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02307	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02307	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02307	CP	mg/kg	11	11	<1	30%	Pass	
Cobalt	M17-Jl02307	CP	mg/kg	7.8	7.9	1.0	30%	Pass	
Copper	M17-Jl02307	CP	mg/kg	15	15	1.0	30%	Pass	
Lead	M17-Jl02307	CP	mg/kg	22	22	<1	30%	Pass	
Manganese	M17-Jl02307	CP	mg/kg	190	190	2.0	30%	Pass	
Mercury	M17-Jl02307	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02307	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02307	CP	mg/kg	34	34	<1	30%	Pass	
Selenium	M17-Jl02307	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02307	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02307	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02307	CP	mg/kg	44	45	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02314	CP	%	30	27	13	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02317	CP	mg/kg	7.6	8.9	15	30%	Pass	
Beryllium	M17-Jl02317	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02317	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02317	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02317	CP	mg/kg	23	24	5.0	30%	Pass	
Cobalt	M17-Jl02317	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02317	CP	mg/kg	15	12	17	30%	Pass	
Lead	M17-Jl02317	CP	mg/kg	93	81	14	30%	Pass	
Manganese	M17-Jl02317	CP	mg/kg	49	47	6.0	30%	Pass	
Mercury	M17-Jl02317	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02317	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02317	CP	mg/kg	13	14	8.0	30%	Pass	
Selenium	M17-Jl02317	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02317	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02317	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02317	CP	mg/kg	93	110	16	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02319	CP	mg/kg	3.7	3.7	<1	30%	Pass	
Beryllium	M17-Jl02319	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02319	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02319	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02319	CP	mg/kg	5.9	6.0	2.0	30%	Pass	
Cobalt	M17-Jl02319	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02319	CP	mg/kg	20	20	<1	30%	Pass	
Lead	M17-Jl02319	CP	mg/kg	48	49	2.0	30%	Pass	
Manganese	M17-Jl02319	CP	mg/kg	15	16	4.0	30%	Pass	
Mercury	M17-Jl02319	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02319	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02319	CP	mg/kg	5.7	5.8	2.0	30%	Pass	
Selenium	M17-Jl02319	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02319	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02319	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02319	CP	mg/kg	69	71	4.0	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
a-BHC	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M17-Jl01218	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	M17-Jl03678	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02326	CP	%	9.9	10	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02328	CP	mg/kg	20	17	17	30%	Pass	
Beryllium	M17-Jl02328	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02328	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02328	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02328	CP	mg/kg	24	27	14	30%	Pass	
Cobalt	M17-Jl02328	CP	mg/kg	< 5	5.5	10	30%	Pass	
Copper	M17-Jl02328	CP	mg/kg	11	10	7.0	30%	Pass	
Lead	M17-Jl02328	CP	mg/kg	47	42	10	30%	Pass	
Manganese	M17-Jl02328	CP	mg/kg	91	90	2.0	30%	Pass	
Molybdenum	M17-Jl02328	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02328	CP	mg/kg	13	14	8.0	30%	Pass	
Selenium	M17-Jl02328	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02328	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02328	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02328	CP	mg/kg	66	61	9.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02330	CP	mg/kg	16	16	<1	30%	Pass	
Beryllium	M17-Jl02330	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02330	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02330	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02330	CP	mg/kg	11	11	1.0	30%	Pass	
Cobalt	M17-Jl02330	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02330	CP	mg/kg	6.3	6.4	2.0	30%	Pass	
Lead	M17-Jl02330	CP	mg/kg	34	34	<1	30%	Pass	
Manganese	M17-Jl02330	CP	mg/kg	34	34	1.0	30%	Pass	
Mercury	M17-Jl02330	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02330	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02330	CP	mg/kg	6.2	6.2	<1	30%	Pass	
Selenium	M17-Jl02330	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02330	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02330	CP	mg/kg	16	16	4.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02336	CP	%	7.0	6.1	15	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02339	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02339	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02339	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02339	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02339	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02339	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02339	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02339	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M17-Jl02339	CP	mg/kg	15	17	12	30%	Pass	
Mercury	M17-Jl02339	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02339	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02339	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02339	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02339	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02339	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02339	CP	mg/kg	26	28	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02340	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02340	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02340	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02340	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M17-Jl02340	CP	mg/kg	5.9	6.0	1.0	30%	Pass	
Mercury	M17-Jl02340	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02340	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02340	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02340	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02340	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02346	CP	%	8.4	7.9	6.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M17-Jl02349	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M17-Jl02349	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M17-Jl02349	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M17-Jl02349	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M17-Jl02349	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M17-Jl02349	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	M17-Jl02349	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M17-Jl02349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M17-Jl02349	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M17-Jl07246	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M17-Jl07246	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M17-Jl07246	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M17-Jl07246	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M17-Jl07246	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M17-Jl07246	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M17-Jl07246	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M17-Jl07246	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M17-Jl07246	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M17-Jl07246	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M17-Jl07246	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M17-Jl07246	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
4-Nitrophenol	M17-Jl07246	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M17-Jl07246	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02350	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02350	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02350	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02350	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	M17-Jl02350	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02350	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02350	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02350	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02350	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02351	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02351	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02351	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02351	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M17-Jl02351	CP	mg/kg	5.3	5.4	3.0	30%	Pass	
Mercury	M17-Jl02351	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02351	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02351	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02351	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02351	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02356	CP	%	12	15	17	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02360	CP	mg/kg	4.1	4.4	7.0	30%	Pass	
Beryllium	M17-Jl02360	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02360	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02360	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02360	CP	mg/kg	9.7	9.7	1.0	30%	Pass	
Cobalt	M17-Jl02360	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02360	CP	mg/kg	13	12	6.0	30%	Pass	
Lead	M17-Jl02360	CP	mg/kg	40	35	14	30%	Pass	
Manganese	M17-Jl02360	CP	mg/kg	90	89	1.0	30%	Pass	
Molybdenum	M17-Jl02360	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02360	CP	mg/kg	9.2	9.3	1.0	30%	Pass	
Selenium	M17-Jl02360	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02360	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02360	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02360	CP	mg/kg	60	59	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02361	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02361	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02361	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02361	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02361	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02361	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02361	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02361	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M17-Jl02361	CP	mg/kg	5.6	5.4	3.0	30%	Pass	
Mercury	M17-Jl02361	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02361	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02361	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02361	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02361	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02361	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02361	CP	mg/kg	17	16	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Clay	M17-Jl02363	CP	%	6.3	8.8	33	30%	Fail	Q15
Conductivity (1:5 aqueous extract at 25°C)	M17-Jl02363	CP	uS/cm	370	320	14	30%	Pass	
pH (1:5 Aqueous extract)	M17-Jl02363	CP	pH Units	8.2	8.1	pass	30%	Pass	
pH (units)(1:5 soil:CaCl2 extract)	M17-Jl02363	CP	pH Units	7.7	7.7	pass	30%	Pass	
Total Organic Carbon	M17-Jl02363	CP	%	1.4	1.8	25	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M17-Jl02365	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M17-Jl02365	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M17-Jl02365	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M17-Jl02365	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M17-Jl02365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M17-Jl02365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M17-Jl02365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M17-Jl02365	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M17-Jl02365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	M17-Jl02365	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M17-Jl02365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M17-Jl02365	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M17-Jl02365	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M17-Jl02365	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M17-Jl02365	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02366	CP	%	7.0	6.7	4.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M17-Jl02371	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02372	CP	mg/kg	4.3	4.5	6.0	30%	Pass	
Beryllium	M17-Jl02372	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02372	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02372	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02372	CP	mg/kg	9.2	9.2	<1	30%	Pass	
Cobalt	M17-Jl02372	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02372	CP	mg/kg	24	24	1.0	30%	Pass	
Lead	M17-Jl02372	CP	mg/kg	44	44	1.0	30%	Pass	
Manganese	M17-Jl02372	CP	mg/kg	86	86	1.0	30%	Pass	
Mercury	M17-Jl02372	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02372	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02372	CP	mg/kg	6.0	6.0	1.0	30%	Pass	
Selenium	M17-Jl02372	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02372	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02372	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02372	CP	mg/kg	84	86	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02376	CP	%	10	8.9	15	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02382	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02382	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02382	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02382	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02382	CP	mg/kg	7.2	7.7	6.0	30%	Pass	
Cobalt	M17-Jl02382	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02382	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02382	CP	mg/kg	5.6	7.8	33	30%	Fail	Q15
Manganese	M17-Jl02382	CP	mg/kg	9.7	13	26	30%	Pass	
Molybdenum	M17-Jl02382	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02382	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02382	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02382	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02382	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02382	CP	mg/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02383	CP	mg/kg	9.3	9.0	3.0	30%	Pass	
Beryllium	M17-Jl02383	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02383	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02383	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02383	CP	mg/kg	33	34	3.0	30%	Pass	
Cobalt	M17-Jl02383	CP	mg/kg	15	16	3.0	30%	Pass	
Copper	M17-Jl02383	CP	mg/kg	28	28	2.0	30%	Pass	
Lead	M17-Jl02383	CP	mg/kg	41	42	3.0	30%	Pass	
Mercury	M17-Jl02383	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02383	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02383	CP	mg/kg	38	39	3.0	30%	Pass	
Selenium	M17-Jl02383	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02383	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02383	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02383	CP	mg/kg	110	110	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02386	CP	%	3.0	2.7	12	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02394	CP	mg/kg	4.3	3.9	12	30%	Pass	
Beryllium	M17-Jl02394	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02394	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02394	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02394	CP	mg/kg	10	11	1.0	30%	Pass	
Cobalt	M17-Jl02394	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02394	CP	mg/kg	17	17	3.0	30%	Pass	
Lead	M17-Jl02394	CP	mg/kg	92	110	16	30%	Pass	
Manganese	M17-Jl02394	CP	mg/kg	54	52	4.0	30%	Pass	
Mercury	M17-Jl02394	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02394	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02394	CP	mg/kg	7.1	7.4	5.0	30%	Pass	
Selenium	M17-Jl02394	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02394	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02394	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02394	CP	mg/kg	150	160	10	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02395	CP	mg/kg	3.6	3.3	7.0	30%	Pass	
Beryllium	M17-Jl02395	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02395	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02395	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02395	CP	mg/kg	9.7	9.8	1.0	30%	Pass	
Cobalt	M17-Jl02395	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02395	CP	mg/kg	16	17	1.0	30%	Pass	
Lead	M17-Jl02395	CP	mg/kg	84	84	<1	30%	Pass	
Manganese	M17-Jl02395	CP	mg/kg	61	62	1.0	30%	Pass	
Mercury	M17-Jl02395	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02395	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02395	CP	mg/kg	11	11	<1	30%	Pass	
Selenium	M17-Jl02395	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02395	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02395	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02395	CP	mg/kg	200	210	2.0	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M17-Jl02396	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M17-Jl02396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M17-Jl02396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M17-Jl02396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M17-Jl02396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M17-Jl02396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	M17-Jl02396	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2.4-Trichlorobenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Tetrachloroethene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M17-Jl02396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M17-Jl02396	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Fluoride	M17-Jl02396	CP	mg/kg	< 100	< 100	<1	30%	Pass	
% Moisture	M17-Jl02396	CP	%	5.7	6.2	10	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M17-Jl02404	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02405	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02405	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02405	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02405	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Cobalt	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M17-Jl02405	CP	mg/kg	6.9	6.9	1.0	30%	Pass	
Mercury	M17-Jl02405	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02405	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02405	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02405	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02405	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02406	CP	%	3.7	3.4	8.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02414	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02414	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02414	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02414	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02414	CP	mg/kg	< 5	5.4	8.0	30%	Pass	
Cobalt	M17-Jl02414	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02414	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02414	CP	mg/kg	12	11	10	30%	Pass	
Manganese	M17-Jl02414	CP	mg/kg	33	28	17	30%	Pass	
Mercury	M17-Jl02414	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02414	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02414	CP	mg/kg	5.0	< 5	45	30%	Fail	Q15
Selenium	M17-Jl02414	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02414	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Tin	M17-Jl02414	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02414	CP	mg/kg	17	15	12	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02415	CP	mg/kg	11	11	3.0	30%	Pass	
Beryllium	M17-Jl02415	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02415	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02415	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02415	CP	mg/kg	25	25	<1	30%	Pass	
Cobalt	M17-Jl02415	CP	mg/kg	5.8	5.9	<1	30%	Pass	
Copper	M17-Jl02415	CP	mg/kg	15	15	<1	30%	Pass	
Lead	M17-Jl02415	CP	mg/kg	16	17	2.0	30%	Pass	
Mercury	M17-Jl02415	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02415	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02415	CP	mg/kg	24	25	1.0	30%	Pass	
Selenium	M17-Jl02415	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02415	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02415	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02415	CP	mg/kg	44	45	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02416	CP	%	3.3	3.7	13	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl02425	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Beryllium	M17-Jl02425	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M17-Jl02425	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M17-Jl02425	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Jl02425	CP	mg/kg	15	15	1.0	30%	Pass	
Cobalt	M17-Jl02425	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M17-Jl02425	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	M17-Jl02425	CP	mg/kg	15	15	<1	30%	Pass	
Manganese	M17-Jl02425	CP	mg/kg	19	19	<1	30%	Pass	
Mercury	M17-Jl02425	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M17-Jl02425	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M17-Jl02425	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M17-Jl02425	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M17-Jl02425	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M17-Jl02425	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M17-Jl02425	CP	mg/kg	11	11	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Jl02426	CP	%	2.3	2.1	12	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference
Q15	The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Mary Makarios	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Alex Petridis	Senior Analyst-Organic (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

Geoaquitards Environmental
PO Box 4040
Dandenong Sth
VIC 3175

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Emmanuel Ernest**

Report **552701-W**
Project name SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID RM406-M.1
Received Date Jul 03, 2017

Client Sample ID			**RINSATE**	**TRIP**
Sample Matrix			**Water**	**Water**
Eurofins | mgt Sample No.			**M17-Jl02564**	**M17-Jl02565**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	0.02	mg/L	-	< 0.02
Heavy Metals				
Arsenic	0.001	mg/L	< 0.001	-
Cadmium	0.0002	mg/L	< 0.0002	-
Chromium	0.001	mg/L	< 0.001	-
Copper	0.001	mg/L	< 0.001	-
Lead	0.001	mg/L	< 0.001	-
Mercury	0.0001	mg/L	< 0.0001	-
Molybdenum	0.005	mg/L	< 0.005	-
Nickel	0.001	mg/L	< 0.001	-
Selenium	0.001	mg/L	< 0.001	-
Silver	0.005	mg/L	< 0.005	-
Tin	0.005	mg/L	< 0.005	-
Zinc	0.005	mg/L	< 0.005	-

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).

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

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B4A			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 05, 2017	7 Day
- Method: LTM-ORG-2010 TRH C6-C36			
Vic EPA IWRG 621 (Solids)			
IWRG 621 Metals : Metals M12	Melbourne	Jul 05, 2017	28 Day
- Method: LTM-MET-3040 Metals in Waters by ICP-MS			

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	73 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02188	X								
2	73 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02189			X	X					
3	73 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02190			X	X					
4	73 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02191				X			X		
5	73 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02192			X	X					
6	68 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02193	X		X	X					
7	68 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02194			X	X					
8	68 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02195				X			X		
9	68 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02196			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
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Dandenong Sth
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
10	62 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02197	X		X	X					
11	62 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02198			X	X					
12	62 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02199				X			X		
13	54 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02200	X		X	X					
14	54 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02201			X	X					
15	54 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02202			X	X					
16	54 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02203				X			X		
17	54 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02204			X	X					
18	DUPLICATE 1	Jul 03, 2017		Soil	M17-Jl02205			X	X					
19	74 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02206	X		X	X					
20	74 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02207			X	X					
21	74 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02208			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
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Dandenong Sth
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Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
22	63 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02209			X	X					
23	63 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02210			X	X					
24	63 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02211			X	X					
25	63 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02212				X			X		
26	63 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02213	X								
27	63 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02214			X	X					
28	55 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02215			X	X					
29	55 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02216	X								
30	55 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02217			X	X					
31	55 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02218			X	X					
32	47 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02219			X	X					
33	47 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02220				X			X		

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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1/21 Smallwood Place
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
34	47 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02221	X								
35	47 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02222			X	X					
36	46 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02223			X	X					
37	46 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02224			X	X					
38	46 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02225	X								
39	46 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02226			X	X					
40	38 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02227			X	X					
41	38 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02228			X	X					
42	38 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02229	X								
43	31 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02230			X	X					
44	31 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02231			X	X					
45	31 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02232	X								

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
46	31 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02233			X	X					
47	30 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02234			X	X					
48	30 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02235			X	X					
49	30 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02236	X								
50	30 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02237			X	X					
51	DUPLICATE 2	Jul 03, 2017		Soil	M17-Jl02238			X	X					
52	39 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02239			X	X					
53	39 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02240			X	X					
54	39 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02241			X	X					
55	39 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02242	X								
56	39 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02243			X	X					
57	32 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02244			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
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Eurofins | mgt Analytical Services Manager : Mary Makarios

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
58	32 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02245			X	X					
59	32 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02246	X								
60	32 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02247			X	X					
61	33 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02248			X	X					
62	33 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02249			X	X					
63	33 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02250			X	X					
64	33 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02251	X								
65	33 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02252			X	X					
66	40 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02253			X	X					
67	40 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02254				X	X				
68	40 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02255			X	X					
69	72 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02256			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
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NATA # 1261 Site # 20794

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
70	72 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02257			X	X					
71	61 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02258	X		X	X					
72	61 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02259			X	X					
73	61 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02260			X	X					
74	53 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02261	X		X	X					
75	53 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02262			X	X					
76	53 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02263			X	X					
77	45 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02264	X		X	X					
78	45 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02265			X	X					
79	45 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02266			X	X					
80	DUPLICATE 4	Jul 03, 2017		Soil	M17-Jl02267			X	X					
81	67 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02268			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
82	67 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02269	X		X	X					
83	67 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02270	X								
84	60 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02271			X	X					
85	60 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02272			X	X					
86	60 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02273			X	X					
87	52 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02274			X	X					
88	52 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02275			X	X					
89	52 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02276	X		X	X					
90	52 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02277			X	X					
91	52 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02278			X	X					
92	44 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02279	X								
93	44 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02280	X								

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
94	57 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02281	X		X	X					
95	57 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02282			X	X					
96	57 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02283			X	X					
97	57 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02284			X	X					
98	65 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02285	X		X	X					
99	65 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02286			X	X					
100	65 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02287			X	X					
101	65 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02288	X		X	X					
102	65 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02289			X	X					
103	76 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02290			X	X					
104	75 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02291	X		X	X					
105	75 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02292			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
106	75 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02293				X	X				
107	75 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02294			X	X					
108	75 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02295			X	X					
109	69 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02296	X								
110	69 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02297			X	X					
111	69 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02298			X	X					
112	69 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02299			X	X					
113	69 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02300			X	X					
114	69 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02301			X	X					
115	64 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02302	X								
116	64 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02303			X	X					
117	64 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02304			X	X					

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web : www.eurofins.com.au

Melbourne
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Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
118	64 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02305			X	X					
119	56 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02306	X		X	X					
120	56 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02307			X	X					
121	56 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02308			X	X					
122	56 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02309			X	X					
123	48 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02310	X		X	X					
124	48 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02311			X	X					
125	48 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02312			X	X					
126	48 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02314			X	X					
127	DUPLICATE 5	Jul 03, 2017		Soil	M17-Jl02315			X	X					
128	DUPLICATE 6	Jul 03, 2017		Soil	M17-Jl02316			X	X					
129	DUPLICATE 7	Jul 03, 2017		Soil	M17-Jl02317			X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
130	43 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02318	X								
131	43 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02319			X	X					
132	43 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02320			X	X					
133	43 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02321			X	X					
134	51 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02322	X								
135	51 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02323			X	X					
136	51 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02324				X				X	
137	51 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02325			X	X					
138	59 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02326	X		X	X					
139	59 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02327			X	X					
140	70 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02328			X	X					
141	70 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02329	X		X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
142	70 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02330			X	X					
143	70 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02331			X	X					
144	37 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02332			X	X					
145	37 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02333			X	X					
146	37 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02334			X	X					
147	29 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02335			X	X					
148	29 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02336			X	X					
149	29 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02337			X	X					
150	28 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02338			X	X					
151	28 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02339			X	X					
152	28 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02340			X	X					
153	36 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02341			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
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Address: PO Box 4040
Dandenong Sth
VIC 3175

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Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
154	36 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02342			X	X					
155	36 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02343			X	X					
156	36 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02344			X	X					
157	36 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02345			X	X					
158	DUPLICATE 8	Jul 03, 2017		Soil	M17-Jl02346			X	X					
159	35 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02347			X	X					
160	35 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02348			X	X					
161	35 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02349				X					X
162	35 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02350			X	X					
163	35 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02351			X	X					
164	35 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02352			X	X					
165	34 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02353			X	X					

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Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
166	41 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02354			X	X					
167	41 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02355			X	X					
168	41 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02356			X	X					
169	49 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02357			X	X					
170	49 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02358			X	X					
171	49 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02359			X	X					
172	42 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02360			X	X					
173	42 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02361			X	X					
174	42 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02362			X	X					
175	50 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02363				X		X			
176	50 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02364			X	X					
177	50 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02365				X					X

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Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
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16 Mars Road
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
178	58 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02366			X	X					
179	58 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02367			X	X					
180	58 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02368			X	X					
181	58 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02369				X				X	
182	66 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02370			X	X					
183	80 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02371			X	X					
184	80 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02372			X	X					
185	79 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02373			X	X					
186	79 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02374			X	X					
187	78 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02375			X	X					
188	78 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02376			X	X					
189	71 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02377			X	X					

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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
190	12 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02378			X	X					
191	13 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02379			X	X					
192	13 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02380			X	X					
193	13 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02381				X					X
194	13 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02382			X	X					
195	21 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02383			X	X					
196	21 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02384				X					X
197	22 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02385			X	X					
198	22 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02386			X	X					
199	22 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02387			X	X					
200	20 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02388			X	X					
201	20 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02389			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
202	20 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02390				X					X
203	83 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02391			X	X					
204	83 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02392			X	X					
205	83 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02393			X	X					
206	82 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02394			X	X					
207	82 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02395			X	X					
208	82 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02396				X				X	
209	82 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02397			X	X					
210	81 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02398			X	X					
211	84 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02399			X	X					
212	84 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02400			X	X					
213	85 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02401			X	X					

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e.mail : EnviroSales@eurofins.com
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Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
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NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
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NATA # 1261 Site # 18217

Brisbane
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
214	85 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02402			X	X					
215	77 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02403			X	X					
216	27 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02404			X	X					
217	19 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02405			X	X					
218	19 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02406			X	X					
219	18 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02407			X	X					
220	18 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02408			X	X					
221	26 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02409			X	X					
222	26 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02410			X	X					
223	14 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02411			X	X					
224	14 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02412			X	X					
225	15 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02413			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
226	15 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02414			X	X					
227	17 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02415			X	X					
228	17 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02416			X	X					
229	25 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02417			X	X					
230	25 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02418			X	X					
231	23 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02419			X	X					
232	23 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02420			X	X					
233	23 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02421				X		X			X
234	16 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02422			X	X					
235	16 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02423			X	X					
236	16 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02424				X				X	
237	16 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02425			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
238	24 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02426			X	X					
239	24 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02427			X	X					
240	24 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02428			X	X					
241	RINSATE	Jul 03, 2017		Water	M17-Jl02564			X						
242	TRIP	Jul 03, 2017		Water	M17-Jl02565		X							
Test Counts						35	1	204	222	2	2	6	4	6

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. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 Advice.

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

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene 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 Aroclor 1260 in Matrix Spikes and LCS.
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 RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Molybdenum	mg/L	< 0.005			0.005	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Selenium	mg/L	< 0.001			0.001	Pass	
Silver	mg/L	< 0.005			0.005	Pass	
Tin	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	104			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	95			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	95			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	97			80-120	Pass	
Mercury	%	96			75-125	Pass	
Molybdenum	%	98			80-120	Pass	
Nickel	%	95			80-120	Pass	
Selenium	%	98			80-120	Pass	
Silver	%	91			80-120	Pass	
Tin	%	94			80-120	Pass	
Zinc	%	96			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	A17-Jn32051	NCP	%	94			75-125	Pass	
Cadmium	A17-Jn32051	NCP	%	94			75-125	Pass	
Chromium	A17-Jn32051	NCP	%	92			75-125	Pass	
Copper	A17-Jn32051	NCP	%	91			75-125	Pass	
Lead	A17-Jn32051	NCP	%	92			75-125	Pass	
Mercury	A17-Jn32051	NCP	%	96			70-130	Pass	
Molybdenum	A17-Jn32051	NCP	%	95			75-125	Pass	
Nickel	A17-Jn32051	NCP	%	91			75-125	Pass	
Selenium	A17-Jn32051	NCP	%	86			75-125	Pass	
Silver	A17-Jn32051	NCP	%	99			75-125	Pass	
Tin	A17-Jn32051	NCP	%	94			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M17-Jl01769	NCP	%	121			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	A17-Jn32051	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	A17-Jn32051	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	A17-Jn32051	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	A17-Jn32051	NCP	mg/L	0.003	0.003	<1	30%	Pass	
Lead	A17-Jn32051	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	A17-Jn32051	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Molybdenum	A17-Jn32051	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Nickel	A17-Jn32051	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Selenium	A17-Jn32051	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Silver	A17-Jn32051	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Tin	A17-Jn32051	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M17-Jl02083	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Mary Makarios	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)



Glenn Jackson
National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Geoaquitards Environmental
PO Box 4040
Dandenong Sth
VIC 3175

Attention:	Emmanuel Ernest
Report	552701-AID
Project Name	SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID	RM406-M.1
Received Date	Jul 03, 2017
Date Reported	Jul 10, 2017

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS4964 method is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w).The examination of large sample sizes(500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction.The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA(friable asbestos) and AF(asbestos fines) then applies where they are able to be quantified by gravimetric procedures.This quantitative screening is not generally applicable to FF(free fibres) and results of Trace Analysis are referred. *NOTE: NATA News March 2014, p.7, states in relation to AS4964: "This is a qualitative method with a nominal reporting limit of 0.01%" and that currently in Australia "there is no validated method available for the quantification of asbestos". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk).* *This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.*

Project Name SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID RM406-M.1
Date Sampled Jul 03, 2017
Report 552701-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
73 @ 0.15M	17-JI02188	Jul 03, 2017	Approximate Sample 98g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
68 @ 0.15M	17-JI02193	Jul 03, 2017	Approximate Sample 72g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
62 @ 0.15M	17-JI02197	Jul 03, 2017	Approximate Sample 85g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
54 @ 0.15M	17-JI02200	Jul 03, 2017	Approximate Sample 52g Sample consisted of: Brown fine grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
74 @ 0.15M	17-JI02206	Jul 03, 2017	Approximate Sample 69g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
63 @ 2.00M	17-JI02213	Jul 03, 2017	Approximate Sample 67g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
55 @ 2.00M	17-JI02216	Jul 03, 2017	Approximate Sample 77g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
47 @ 2.00M	17-JI02221	Jul 03, 2017	Approximate Sample 79g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
46 @ 2.00M	17-JI02225	Jul 03, 2017	Approximate Sample 85g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
38 @ 1.50M	17-JI02229	Jul 03, 2017	Approximate Sample 76g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
31 @ 2.00M	17-JI02232	Jul 03, 2017	Approximate Sample 100g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
30 @ 2.00M	17-JI02236	Jul 03, 2017	Approximate Sample 85g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
39 @ 2.00M	17-JI02242	Jul 03, 2017	Approximate Sample 53g Sample consisted of: Brown fine grain soil and rocks	Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of asbestos containing material = 0.95g Organic fibre detected.
32 @ 2.00M	17-JI02246	Jul 03, 2017	Approximate Sample 75g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
33 @ 2.00M	17-JI02251	Jul 03, 2017	Approximate Sample 34g Sample consisted of: Brown fine grain soil, organic debris and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
61 @ 0.15M	17-JI02258	Jul 03, 2017	Approximate Sample 56g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
53 @ 0.15M	17-JI02261	Jul 03, 2017	Approximate Sample 73g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
45 @ 0.15M	17-JI02264	Jul 03, 2017	Approximate Sample 81g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
67 @ 0.50M	17-JI02269	Jul 03, 2017	Approximate Sample 66g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
67 @ 2.00M	17-JI02270	Jul 03, 2017	Approximate Sample 84g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
52 @ 1.00M	17-JI02276	Jul 03, 2017	Approximate Sample 83g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
44 @ 0.15M	17-JI02279	Jul 03, 2017	Approximate Sample 80g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
44 @ 2.00M	17-JI02280	Jul 03, 2017	Approximate Sample 127g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
57 @ 0.15M	17-JI02281	Jul 03, 2017	Approximate Sample 82g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
65 @ 0.15M	17-JI02285	Jul 03, 2017	Approximate Sample 80g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
65 @ 2.50M	17-JI02288	Jul 03, 2017	Approximate Sample 139g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
75 @ 0.15M	17-JI02291	Jul 03, 2017	Approximate Sample 100g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
69 @ 0.15M	17-JI02296	Jul 03, 2017	Approximate Sample 141g Sample consisted of: Brown fine grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
64 @ 0.15M	17-JI02302	Jul 03, 2017	Approximate Sample 93g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
56 @ 0.15M	17-JI02306	Jul 03, 2017	Approximate Sample 56g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
48 @ 0.15M	17-JI02310	Jul 03, 2017	Approximate Sample 75g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
43 @ 0.15M	17-JI02318	Jul 03, 2017	Approximate Sample 86g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
51 @ 0.15M	17-JI02322	Jul 03, 2017	Approximate Sample 65g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
59 @ 0.15M	17-JI02326	Jul 03, 2017	Approximate Sample 51g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
70 @ 0.50M	17-JI02329	Jul 03, 2017	Approximate Sample 52g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.

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).

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 04, 2017	Indefinite

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail	Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X								
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 18217									
External Laboratory									

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
1	73 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02188	X							
2	73 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02189			X	X				
3	73 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02190			X	X				
4	73 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02191				X			X	
5	73 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02192			X	X				
6	68 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02193	X		X	X				
7	68 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02194			X	X				
8	68 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02195				X			X	
9	68 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02196			X	X				

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
10	62 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02197	X		X	X					
11	62 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02198			X	X					
12	62 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02199				X			X		
13	54 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02200	X		X	X					
14	54 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02201			X	X					
15	54 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02202			X	X					
16	54 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02203				X			X		
17	54 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02204			X	X					
18	DUPLICATE 1	Jul 03, 2017		Soil	M17-Jl02205			X	X					
19	74 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02206	X		X	X					
20	74 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02207			X	X					
21	74 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02208			X	X					

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
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Unit F3, Building F
16 Mars Road
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Phone : +61 2 9900 8400
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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
22	63 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02209			X	X					
23	63 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02210			X	X					
24	63 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02211			X	X					
25	63 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02212				X			X		
26	63 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02213	X								
27	63 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02214			X	X					
28	55 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02215			X	X					
29	55 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02216	X								
30	55 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02217			X	X					
31	55 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02218			X	X					
32	47 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02219			X	X					
33	47 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02220				X			X		

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
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2/91 Leach Highway
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
34	47 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02221	X								
35	47 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02222			X	X					
36	46 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02223			X	X					
37	46 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02224			X	X					
38	46 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02225	X								
39	46 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02226			X	X					
40	38 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02227			X	X					
41	38 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02228			X	X					
42	38 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02229	X								
43	31 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02230			X	X					
44	31 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02231			X	X					
45	31 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02232	X								

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

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

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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
46	31 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02233			X	X					
47	30 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02234			X	X					
48	30 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02235			X	X					
49	30 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02236	X								
50	30 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02237			X	X					
51	DUPLICATE 2	Jul 03, 2017		Soil	M17-Jl02238			X	X					
52	39 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02239			X	X					
53	39 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02240			X	X					
54	39 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02241			X	X					
55	39 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02242	X								
56	39 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02243			X	X					
57	32 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02244			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

Brisbane
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Murarrie QLD 4172
Phone : +61 7 3902 4600
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
58	32 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02245			X	X					
59	32 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02246	X								
60	32 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02247			X	X					
61	33 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02248			X	X					
62	33 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02249			X	X					
63	33 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02250			X	X					
64	33 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02251	X								
65	33 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02252			X	X					
66	40 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02253			X	X					
67	40 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02254				X	X				
68	40 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02255			X	X					
69	72 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02256			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
70	72 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02257			X	X					
71	61 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02258	X		X	X					
72	61 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02259			X	X					
73	61 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02260			X	X					
74	53 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02261	X		X	X					
75	53 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02262			X	X					
76	53 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02263			X	X					
77	45 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02264	X		X	X					
78	45 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02265			X	X					
79	45 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02266			X	X					
80	DUPLICATE 4	Jul 03, 2017		Soil	M17-Jl02267			X	X					
81	67 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02268			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

Brisbane
1/21 Smallwood Place
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Phone : +61 7 3902 4600
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Perth
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
82	67 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02269	X		X	X					
83	67 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02270	X								
84	60 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02271			X	X					
85	60 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02272			X	X					
86	60 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02273			X	X					
87	52 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02274			X	X					
88	52 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02275			X	X					
89	52 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02276	X		X	X					
90	52 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02277			X	X					
91	52 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02278			X	X					
92	44 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02279	X								
93	44 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02280	X								

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Melbourne
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Oakleigh VIC 3166
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NATA # 1261
Site # 1254 & 14271

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Eurofins | mgt Analytical Services Manager : Mary Makarios

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
94	57 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02281	X		X	X					
95	57 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02282			X	X					
96	57 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02283			X	X					
97	57 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02284			X	X					
98	65 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02285	X		X	X					
99	65 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02286			X	X					
100	65 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02287			X	X					
101	65 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02288	X		X	X					
102	65 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02289			X	X					
103	76 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02290			X	X					
104	75 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02291	X		X	X					
105	75 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02292			X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
106	75 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02293				X	X				
107	75 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02294			X	X					
108	75 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02295			X	X					
109	69 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02296	X								
110	69 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02297			X	X					
111	69 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02298			X	X					
112	69 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02299			X	X					
113	69 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02300			X	X					
114	69 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02301			X	X					
115	64 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02302	X								
116	64 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02303			X	X					
117	64 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02304			X	X					

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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
118	64 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02305			X	X					
119	56 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02306	X		X	X					
120	56 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02307			X	X					
121	56 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02308			X	X					
122	56 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02309			X	X					
123	48 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02310	X		X	X					
124	48 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02311			X	X					
125	48 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02312			X	X					
126	48 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02314			X	X					
127	DUPLICATE 5	Jul 03, 2017		Soil	M17-Jl02315			X	X					
128	DUPLICATE 6	Jul 03, 2017		Soil	M17-Jl02316			X	X					
129	DUPLICATE 7	Jul 03, 2017		Soil	M17-Jl02317			X	X					

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Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

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Received: Jul 3, 2017 4:04 PM
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Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
130	43 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02318	X								
131	43 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02319			X	X					
132	43 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02320			X	X					
133	43 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02321			X	X					
134	51 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02322	X								
135	51 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02323			X	X					
136	51 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02324				X				X	
137	51 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02325			X	X					
138	59 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02326	X		X	X					
139	59 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02327			X	X					
140	70 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02328			X	X					
141	70 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02329	X		X	X					

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web : www.eurofins.com.au

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

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

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

Perth
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
142	70 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02330			X	X					
143	70 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02331			X	X					
144	37 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02332			X	X					
145	37 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02333			X	X					
146	37 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02334			X	X					
147	29 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02335			X	X					
148	29 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02336			X	X					
149	29 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02337			X	X					
150	28 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02338			X	X					
151	28 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02339			X	X					
152	28 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02340			X	X					
153	36 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02341			X	X					

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web : www.eurofins.com.au

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

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

Brisbane
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
154	36 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02342			X	X					
155	36 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02343			X	X					
156	36 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02344			X	X					
157	36 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02345			X	X					
158	DUPLICATE 8	Jul 03, 2017		Soil	M17-Jl02346			X	X					
159	35 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02347			X	X					
160	35 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02348			X	X					
161	35 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02349				X					X
162	35 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02350			X	X					
163	35 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02351			X	X					
164	35 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02352			X	X					
165	34 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02353			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
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Dandenong Sth
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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
166	41 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02354			X	X					
167	41 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02355			X	X					
168	41 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02356			X	X					
169	49 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02357			X	X					
170	49 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02358			X	X					
171	49 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02359			X	X					
172	42 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02360			X	X					
173	42 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02361			X	X					
174	42 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02362			X	X					
175	50 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02363				X		X			
176	50 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02364			X	X					
177	50 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02365				X					X

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web : www.eurofins.com.au

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
178	58 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02366			X	X					
179	58 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02367			X	X					
180	58 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02368			X	X					
181	58 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02369				X				X	
182	66 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02370			X	X					
183	80 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02371			X	X					
184	80 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02372			X	X					
185	79 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02373			X	X					
186	79 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02374			X	X					
187	78 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02375			X	X					
188	78 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02376			X	X					
189	71 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02377			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
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Phone : +61 7 3902 4600
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2/91 Leach Highway
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
190	12 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02378			X	X					
191	13 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02379			X	X					
192	13 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02380			X	X					
193	13 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02381				X					X
194	13 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02382			X	X					
195	21 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02383			X	X					
196	21 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02384				X					X
197	22 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02385			X	X					
198	22 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02386			X	X					
199	22 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02387			X	X					
200	20 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02388			X	X					
201	20 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02389			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
202	20 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02390				X					X
203	83 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02391			X	X					
204	83 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02392			X	X					
205	83 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02393			X	X					
206	82 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02394			X	X					
207	82 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02395			X	X					
208	82 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02396				X				X	
209	82 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02397			X	X					
210	81 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02398			X	X					
211	84 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02399			X	X					
212	84 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02400			X	X					
213	85 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02401			X	X					

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
214	85 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02402			X	X					
215	77 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02403			X	X					
216	27 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02404			X	X					
217	19 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02405			X	X					
218	19 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02406			X	X					
219	18 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02407			X	X					
220	18 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02408			X	X					
221	26 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02409			X	X					
222	26 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02410			X	X					
223	14 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02411			X	X					
224	14 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02412			X	X					
225	15 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02413			X	X					

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
226	15 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02414			X	X					
227	17 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02415			X	X					
228	17 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02416			X	X					
229	25 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02417			X	X					
230	25 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02418			X	X					
231	23 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02419			X	X					
232	23 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02420			X	X					
233	23 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02421				X		X			X
234	16 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02422			X	X					
235	16 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02423			X	X					
236	16 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02424				X				X	
237	16 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02425			X	X					

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
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Unit F3, Building F
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
238	24 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02426			X	X					
239	24 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02427			X	X					
240	24 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02428			X	X					
241	RINSATE	Jul 03, 2017		Water	M17-Jl02564			X						
242	TRIP	Jul 03, 2017		Water	M17-Jl02565		X							
Test Counts						35	1	204	222	2	2	6	4	6

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. 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 Advice.

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.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substatntial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Nibha Vaidya Senior Analyst-Asbestos (NSW)



Glenn Jackson
National Operations 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

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM1708657**	Page	: 1 of 4
Client	: **GEOAQUITARDS ENVIRONMENTAL**	Laboratory	: Environmental Division Melbourne
Contact	: EMMANUEL ERNEST	Contact	:
Address	: PO BOX 4040 DANDENONG SOUTH MELBOURNE 3164	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 9554 3258	Telephone	: +61-3-8549 9600
Project	: RM406-M.1	Date Samples Received	: 03-Jul-2017 16:30
Order number	: ----	Date Analysis Commenced	: 04-Jul-2017
C-O-C number	: ----	Issue Date	: 05-Jul-2017 16:37
Sampler	: ----		
Site	: Sandringham Golf Driving Range - 20 Wandgara Road, Sandringham		
Quote number	: MEQB-184-15		
No. of samples received	: 8		
No. of samples analysed	: 8		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SPLIT 1	SPLIT 2	SPLIT 3	SPLIT 4	SPLIT 5
				Client sampling date / time	03-Jul-2017 00:00	03-Jul-2017 00:00	03-Jul-2017 00:00	03-Jul-2017 00:00	03-Jul-2017 00:00
Compound	CAS Number	LOR	Unit		EM1708657-001	EM1708657-002	EM1708657-003	EM1708657-004	EM1708657-005
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1	%		16.6	9.1	29.1	8.4	10.8
EG005T: Total Metals by ICP-AES									
Molybdenum	7439-98-7	2	mg/kg		4	<2	2	<2	<2
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg		<2	<2	111	<2	<2
Tin	7440-31-5	5	mg/kg		40	<5	<5	<5	<5
Arsenic	7440-38-2	5	mg/kg		6	<5	5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	3	<1	<1
Chromium	7440-47-3	2	mg/kg		10	5	17	14	6
Copper	7440-50-8	5	mg/kg		58	7	53	8	8
Lead	7439-92-1	5	mg/kg		58	11	90	18	24
Nickel	7440-02-0	2	mg/kg		8	2	17	13	5
Zinc	7440-66-6	5	mg/kg		105	28	391	35	27
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.6	5.0	0.2	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SPLIT 6	SPLIT 7	SPLIT 8	----	----
			Client sampling date / time	03-Jul-2017 00:00	03-Jul-2017 00:00	03-Jul-2017 00:00	----	----
Compound	CAS Number	LOR	Unit	EM1708657-006	EM1708657-007	EM1708657-008	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1	%	**9.0**	**11.0**	**7.3**	**----**	**----**
EG005T: Total Metals by ICP-AES								
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	**----**	**----**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	**----**	**----**
Silver	7440-22-4	2	mg/kg	**4**	<2	<2	**----**	**----**
Tin	7440-31-5	5	mg/kg	**213**	<5	<5	**----**	**----**
Arsenic	7440-38-2	5	mg/kg	**8**	<5	<5	**----**	**----**
Cadmium	7440-43-9	1	mg/kg	**1**	<1	<1	**----**	**----**
Chromium	7440-47-3	2	mg/kg	**21**	**15**	**9**	**----**	**----**
Copper	7440-50-8	5	mg/kg	**59**	**10**	**20**	**----**	**----**
Lead	7439-92-1	5	mg/kg	**65**	**57**	**41**	**----**	**----**
Nickel	7440-02-0	2	mg/kg	**16**	**8**	**5**	**----**	**----**
Zinc	7440-66-6	5	mg/kg	**127**	**52**	**56**	**----**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.5**	<0.1	**0.1**	**----**	**----**

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM1708657**	Page	: 1 of 5
Client	: **GEOAQUITARDS ENVIRONMENTAL**	Laboratory	: Environmental Division Melbourne
Contact	: EMMANUEL ERNEST	Contact	:
Address	: PO BOX 4040 DANDENONG SOUTH MELBOURNE 3164	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 9554 3258	Telephone	: +61-3-8549 9600
Project	: RM406-M.1	Date Samples Received	: 03-Jul-2017
Order number	: ----	Date Analysis Commenced	: 04-Jul-2017
C-O-C number	: ----	Issue Date	: 05-Jul-2017
Sampler	: ----		
Site	: Sandringham Golf Driving Range - 20 Wandgara Road, Sandringham		
Quote number	: MEQB-184-15		
No. of samples received	: 8		
No. of samples analysed	: 8		

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

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

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

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

Signatories	*Position*	*Accreditation Category*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 978246)									
EM1708631-046	Anonymous	EA055: Moisture Content	----	1	%	21.5	21.9	1.84	0% - 20%
EM1708657-002	SPLIT 2	EA055: Moisture Content	----	1	%	9.1	8.9	2.43	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 978204)									
EM1708600-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	26	26	0.00	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	47	44	8.01	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	32	42	25.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	56	49	12.8	0% - 50%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	6	24.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	182	193	6.18	0% - 20%
EM1708600-011	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	12	13.8	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	8	16.1	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	10	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	111	110	0.00	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	326	323	1.00	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	12	12	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	230	230	0.00	0% - 20%

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005T: Total Metals by ICP-AES (QC Lot: 978206)									
EM1708657-003	SPLIT 3	EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	391	436	10.9	0% - 20%
EM1708657-003	SPLIT 3	EG005T: Cadmium	7440-43-9	1	mg/kg	3	4	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	20	16.9	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	2	7	109	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	17	15	13.8	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	111	109	1.79	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	53	37	37.2	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	90	73	21.0	0% - 50%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 978205)									
EM1708600-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM1708600-011	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 978207)									
EM1708657-003	SPLIT 3	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.00	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 978204)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	96.8	79	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	94.2	85	109
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	94.9	89	113
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	93.8	84	116
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	90.6	85	107
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	7.9 mg/kg	95.4	86	112
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	94.9	89	111
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	101	93	109
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.1 mg/kg	84.1	80	108
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.2 mg/kg	94.8	92	114
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	93.2	89	111
EG005T: Total Metals by ICP-AES (QCLot: 978206)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	95.5	79	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	93.6	85	109
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	94.1	89	113
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	92.5	84	116
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	90.0	85	107
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	7.9 mg/kg	92.6	86	112
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	94.9	89	111
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	101	93	109
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.1 mg/kg	83.6	80	108
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.2 mg/kg	92.8	92	114
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	92.5	89	111
EG035T: Total Recoverable Mercury by FIMS (QCLot: 978205)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	87.0	85	103
EG035T: Total Recoverable Mercury by FIMS (QCLot: 978207)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	88.2	85	103

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Matrix Spike (MS) Report		
Spike	SpikeRecovery(%)	Recovery Limits (%)

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 978204)							
EM1708600-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	105	78	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	104	84	116
		EG005T: Chromium	7440-47-3	50 mg/kg	108	79	121
		EG005T: Copper	7440-50-8	50 mg/kg	122	82	124
		EG005T: Lead	7439-92-1	50 mg/kg	103	76	124
		EG005T: Molybdenum	7439-98-7	50 mg/kg	101	79	117
		EG005T: Nickel	7440-02-0	50 mg/kg	102	78	120
		EG005T: Selenium	7782-49-2	50 mg/kg	88.9	71	125
		EG005T: Zinc	7440-66-6	50 mg/kg	127	74	128
EG005T: Total Metals by ICP-AES (QCLot: 978206)							
EM1708657-004	SPLIT 4	EG005T: Arsenic	7440-38-2	50 mg/kg	93.4	78	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	97.8	84	116
		EG005T: Chromium	7440-47-3	50 mg/kg	98.8	79	121
		EG005T: Copper	7440-50-8	50 mg/kg	93.5	82	124
		EG005T: Lead	7439-92-1	50 mg/kg	95.3	76	124
		EG005T: Molybdenum	7439-98-7	50 mg/kg	95.5	79	117
		EG005T: Nickel	7440-02-0	50 mg/kg	100	78	120
		EG005T: Selenium	7782-49-2	50 mg/kg	96.8	71	125
		EG005T: Zinc	7440-66-6	50 mg/kg	94.5	74	128
EG035T: Total Recoverable Mercury by FIMS (QCLot: 978205)							
EM1708600-002	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	86.7	76	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 978207)							
EM1708657-004	SPLIT 4	EG035T: Mercury	7439-97-6	5 mg/kg	89.9	76	116

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM1708657**	Page	: 1 of 4
Client	: **GEOAQUITARDS ENVIRONMENTAL**	Laboratory	: Environmental Division Melbourne
Contact	: EMMANUEL ERNEST	Telephone	: +61-3-8549 9600
Project	: RM406-M.1	Date Samples Received	: 03-Jul-2017
Site	: Sandringham Golf Driving Range - 20 Wandgara Road, Sandringham	Issue Date	: 05-Jul-2017
Sampler	: ----	No. of samples received	: 8
Order number	: ----	No. of samples analysed	: 8

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
SPLIT 1, SPLIT 2, SPLIT 3, SPLIT 4, SPLIT 5, SPLIT 6, SPLIT 7, SPLIT 8	**03-Jul-2017**	**----**	----	----	**04-Jul-2017**	17-Jul-2017	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
SPLIT 1, SPLIT 2, SPLIT 3, SPLIT 4, SPLIT 5, SPLIT 6, SPLIT 7, SPLIT 8	**03-Jul-2017**	**04-Jul-2017**	30-Dec-2017	✓	**04-Jul-2017**	30-Dec-2017	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SPLIT 1, SPLIT 2, SPLIT 3, SPLIT 4, SPLIT 5, SPLIT 6, SPLIT 7, SPLIT 8	**03-Jul-2017**	**04-Jul-2017**	31-Jul-2017	✓	**05-Jul-2017**	31-Jul-2017	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	26	**11.54**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	26	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)

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Certificate of Analysis

Geoaquitards Environmental
PO Box 4040
Dandenong Sth
VIC 3175

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Emmanuel Ernest**

Report **553942-L**
Project name SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID RM406-M.1
Received Date Jul 12, 2017

Client Sample ID			**48@3.0M**	**68@0.5M**
Sample Matrix			**AUS Leachate**	**AUS Leachate**
Eurofins | mgt Sample No.			**M17-Jl13566**	**M17-Jl13567**
Date Sampled			**Jul 03, 2017**	**Jul 03, 2017**
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene	0.001	mg/L	-	< 0.001
Heavy Metals				
Arsenic	0.01	mg/L	0.02	-
Cadmium	0.005	mg/L	< 0.005	-
Copper	0.01	mg/L	0.03	-
Lead	0.01	mg/L	0.17	-
Nickel	0.01	mg/L	0.09	-
Tin	0.5	mg/L	< 0.5	-
Zinc	0.01	mg/L	2.1	-
AUS Leaching Procedure				
Leachate Fluid[C01]		comment	1.0	1.0
pH (initial)	0.1	pH Units	8.7	8.2
pH (Leachate fluid)	0.1	pH Units	5.0	5.0
pH (off)	0.1	pH Units	5.3	5.2

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).

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

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons	Melbourne	Jul 13, 2017	7 Day
- Method: LTM-ORG-2140 PAH and Phenols in Soils by GCMS			
Heavy Metals	Melbourne	Jul 12, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
AUS Leaching Procedure	Melbourne	Jul 12, 2017	7 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 553942
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 12, 2017 5:17 PM
Due: Jul 17, 2017
Priority: 3 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Arsenic	Benzo(a)pyrene	Cadmium	Copper	Lead	Nickel	Tin	Zinc	AUS Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 18217														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	48@3.0M	Jul 03, 2017		AUS Leachate	M17-Jl13566	X		X	X	X	X	X	X	X
2	68@0.5M	Jul 03, 2017		AUS Leachate	M17-Jl13567		X							X
Test Counts						1	1	1	1	1	1	1	1	2

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. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 Advice.

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

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene 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 Aroclor 1260 in Matrix Spikes and LCS.
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 RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.01			0.01	Pass	
Cadmium	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.01			0.01	Pass	
Lead	mg/L	< 0.01			0.01	Pass	
Nickel	mg/L	< 0.01			0.01	Pass	
Tin	mg/L	< 0.5			0.5	Pass	
Zinc	mg/L	< 0.01			0.01	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Jl12106	NCP	%	101			75-125	Pass	
Cadmium	M17-Jl12106	NCP	%	97			75-125	Pass	
Copper	M17-Jl12106	NCP	%	91			75-125	Pass	
Lead	M17-Jl12106	NCP	%	92			75-125	Pass	
Nickel	M17-Jl12106	NCP	%	91			75-125	Pass	
Tin	M17-Jl12106	NCP	%	102			75-125	Pass	
Zinc	M17-Jl12106	NCP	%	99			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Jl12106	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Cadmium	M17-Jl12106	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Copper	M17-Jl12106	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Lead	M17-Jl12106	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Nickel	M17-Jl12106	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tin	M17-Jl12106	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Zinc	M17-Jl12106	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised By

Mary Makarios	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Alex Petridis	Senior Analyst-Organic (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson
National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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APPENDIX G
CHAIN-OF-CUSTODY FORMS

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164
CONTACT NAME: EMMANUEL ERNEST
PHONE NO:03 9554 3258
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948
TURNAROUND TIME: Normal

Job No: RM406-M.1
Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
Date 3/07/2017
EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES

Secondary Lab Address

No Total Number of samples

No	SAMPLE ID	MATRIX	DATE	Lab ID	CONTAINER INFORMATION (PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)
1	73@0.15m	Soil	3/7/17		0.2					✓		
2	73 @ 0.50m	Soil	3/7/17		0.2							✓
3	73 @ 1.00m	Soil	3/7/17		0.3							✓
4	73 @ 1.50m	Soil	3/7/17		0.1						✓	
5	73 @ 2.00m	Soil	3/7/17		0.4							
6	73 @ 2.50m	Soil	3/7/17		0.1							
7	73 @ 3.00m	Soil	3/7/17		0.2							
8	68 @ 0.15m	Soil	3/7/17		0.1					✓		✓
9	68 @ 0.50m	Soil	3/7/17		0.1							✓
10	68 @ 1.00m	Soil	3/7/17		0.1							✓
11	68 @ 1.50m	Soil	3/7/17		0.1						✓	
12	68 @ 2.00m	Soil	3/7/17		0.1							✓

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017
Signature: Time: 1:45 pm

RECEIVED BY

Name: Jonathan Mete Date: 3/7
Signature: JMete Time 4:04

METHOD OF SHIPMENT
Courier:
Hand Delivered:
Transport Co:
Postal

Y= Yes Analysis Required

Report: 552701 / 552720

COC Page 1 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Normal

Job No: RM406-M.1

Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**

Date 3/07/2017

EMAIL REPORT TO:geo@primus.com.au Attention: Emmanuel Ernest

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES

Secondary Lab Address

No Total Number of samples

No	SAMPLE ID	MATRIX	DATE	Lab ID	CONTAINER INFORMATION (PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)
13	62@0.15m	Soil	3/7/17		0.2					✓		✓
14	62@0.50m	Soil	3/7/17		0.0							✓
15	62@1.00m	Soil	3/7/17		0.1							
16	62@1.50m	Soil	3/7/17		0.0						✓	
17	54@0.15m	Soil	3/7/17		0.0					✓		✓
18	54@0.50m	Soil	3/7/17		0.0							✓
19	54@1.00m	Soil	3/7/17		0.1							✓
20	54@1.50m	Soil	3/7/17		0.6							
21	54@2.00m	Soil	3/7/17		0.3							
22	54@2.50m	Soil	3/7/17		0.2						✓	
23	54@3.00m	Soil	3/7/17		0.4							✓
24	DUPLICATE1	Soil	3/7/17									✓

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017

Signature: Time: 1.45 pm

RECEIVED BY

Name: Tony Wong Date: 3/7/17

Signature: Time 4:04

METHOD OF SHIPMENT

Courier:

Hand Delivered:

Transport Co:

Postal

Y= Yes Analysis Required

Report: 552701/552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
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F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wangara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
25	74@0.15m	Soil	3/7/17		0.0					✓		✓						
26	74@0.50m	Soil	3/7/17		0.0							✓						
27	74@1.00m	Soil	3/7/17		0.0													
28	74@1.50m	Soil	3/7/17		0.1													
29	74@2.00m	Soil	3/7/17		0.2													
30	74@2.50m	Soil	3/7/17		0.4							✓						
31	74@3.00m	Soil	3/7/17		0.1							✓						
32	63@0.15m	Soil	3/7/17		0.1							✓						
33	63@0.50m	Soil	3/7/17		0.4							✓						
34	63@1.00m	Soil	3/7/17		0.9							✓						
35	63@1.50m	Soil	3/7/17		0.9						✓							
36	63@2.00m	Soil	3/7/17		0.5					✓								

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45pm	Signature:	Time 4:04pm	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701/552720

COC Page 3 of 5

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
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F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Normal

Job No: RM406-M.1

Project: Sandringham Golf Driving Range- ~~29 Wandgera Road, Sandringham~~ 20 Wangara Road, Sandringham

Date 3/07/2017

EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
37	63@2.50m	Soil	3/7/17		0.8													
38	63@3.00m	Soil	3/7/17		0.4							✓						
39	55@0.15m	Soil	3/7/17		1.6													
40	55@0.50m	Soil	3/7/17		0.5							✓						
41	55@1.00m	Soil	3/7/17		0.4													
42	55@1.50m	Soil	3/7/17		0.6													
43	55@2.00m	Soil	3/7/17		0.8					✓								
44	55@2.50m	Soil	3/7/17		1.0							✓						
45	55@3.00m	Soil	3/7/17		3.6							✓						
46	47@0.15m	Soil	3/7/17		0.7							✓						
47	47@0.50m	Soil	3/7/17		0.5													
48	47@1.00m	Soil	3/7/17		0.4													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wang	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
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Report: 552701/552720

COC Page 4 of 4.3

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164
CONTACT NAME: EMMANUEL ERNEST
PHONE NO:03 9554 3258
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948
TURNAROUND TIME: Normal

Job No: RM406-M.1
Project: Sandringham Golf Driving Range ~~28 Wangara Road, Sandringham~~ **20 Wangara Road, Sandringham**
Date 3/07/2017
EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
49	47E1.50m	Soil	3/7/17		1.5						✓							
50	47E2.00m	Soil	3/7/17		2.3					✓								
51	47E2.50m	Soil	3/7/17		2.7													
52	47E3.00m	Soil	3/7/17		1.0													
53	46E0.15m	Soil	3/7/17		0.0							✓						
54	46E0.50m	Soil	3/7/17		0.0							✓						
55	46E1.00m	Soil	3/7/17		0.1							✓						
56	46E1.50m	Soil	3/7/17		0.0													
57	46E2.00m	Soil	3/7/17		0.4					✓								
58	46E2.50m	Soil	3/7/17		0.1													
59	46E3.00m	Soil	3/7/17		0.0							✓						
60	38E0.15m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:

Name: EMMANUEL ERNEST
Date: 3/07/2017
Signature:
Time: 1.45

RECEIVED BY

Name: Tony Wong
Date: 3/7/17
Signature:
Time 4:04 pm

METHOD OF SHIPMENT

Courier:
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Postal

Y= Yes Analysis Required

Report: 552701/552720

COC Page 5 of 13

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
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F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL		Job No:	RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164		Project:	Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST		Date	3/07/2017
PHONE NO:03 9554 3258		EMAIL REPORT TO:geo@iprimus.com.au	Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678	FAX NO:03 9705 7946		
TURNAROUND TIME:	Normal	ANALYSIS REQUIRED including SUITES	

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)
61	38 @ 0.50m	Soil	3/7/17		0.1							✓
62	38 @ 1.00m	Soil	3/7/17		0.0							
63	38 @ 1.50m	Soil	3/7/17		0.0					✓		
64	31 @ 0.15m	Soil	3/7/17		0.0							✓
65	31 @ 0.50m	Soil	3/7/17		0.0							✓
66	31 @ 1.00m	Soil	3/7/17		0.0							
67	31 @ 1.50m	Soil	3/7/17		0.0						✓	
68	31 @ 2.00m	Soil	3/7/17		0.0					✓		
69	31 @ 2.50m	Soil	3/7/17		0.0							
70	31 @ 3.00m	Soil	3/7/17		0.3							✓
71	30 @ 0.15m	Soil	3/7/17		0.0							✓
72	30 @ 0.50m	Soil	3/7/17		0.0							✓

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04 pm	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

COC Page 8 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7946
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM408-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
73	30@1.00m	Soil	3/7/17		0.0													
74	30@1.50m	Soil	3/7/17		0.0													
75	30@2.00m	Soil	3/7/17		0.1					✓	✓							
76	30@2.50m	Soil	3/7/17		0.1													
77	30@3.00m	Soil	3/7/17		0.0							✓						
78	DUPLICATE 2	Soil	3/7/17									✓						
79	39@0.15m	Soil	3/7/17		0.0							✓						
80	39@0.50m	Soil	3/7/17		0.1							✓						
81	39@1.00m	Soil	3/7/17		0.2							✓						
82	39@1.50m	Soil	3/7/17		0.1					✓	✓							
83	39@2.00m	Soil	3/7/17		0.7					✓								
84	39@2.50m	Soil	3/7/17		0.5							✓						

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04 pm	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701/552720

COC Page 7 of 9

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham.~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Norne	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)
85	39C 3.00m	Soil	3/7/17		0.0							
86	32C 0.15m	Soil	3/7/17		0.0							✓
87	32C 0.50m	Soil	3/7/17		0.0							✓
88	32C 1.00m	Soil	3/7/17		0.2							
89	32C 1.50m	Soil	3/7/17		0.7							
90	32C 2.00m	Soil	3/7/17		0.2					✓		
91	32C 2.50m	Soil	3/7/17		0.2							
92	32C 3.00m	Soil	3/7/17		0.2							✓
93	33C 0.15m	Soil	3/7/17		0.1							✓
94	33C 0.50m	Soil	3/7/17		0.2							✓
95	33C 1.00m	Soil	3/7/17		0.1							✓
96	33C 1.50m	Soil	3/7/17		0.0							✓

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04pm	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 | 552720

COC Page 8 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164
CONTACT NAME: EMMANUEL ERNEST
PHONE NO:03 9554 3258
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948
TURNAROUND TIME: Normal

Job No: RM406-M.1
Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
Date 3/07/2017
EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)	NEPM R20					
No	SAMPLE ID	MATRIX	DATE	Lab ID	Comments	Other												
97	33@2.00m	Soil	3/7/17		0.0					✓								
98	33@2.50m	Soil	3/7/17		0.1													
99	33@3.00m	Soil	3/7/17		0.1							✓						
100	40@0.15m	Soil	3/7/17		0.0							✓						
101	40@0.50m	Soil	3/7/17		0.1													
102	40@1.00m	Soil	3/7/17		0.1								✓					
103	40@1.50m	Soil	3/7/17		1.4		✓											
104	40@2.00m	Soil	3/7/17		0.3													
105	40@2.50m	Soil	3/7/17		1.2													
106	40@3.00m	Soil	3/7/17		1.4							✓						
107	72@0.15m	Soil	3/7/17		0.2							✓						
108	72@0.50m	Soil	3/7/17		0.1							✓						

RELINQUISHED BY:

Name: EMMANUEL ERNEST
Date: 3/07/2017
Signature:
Time: 1:43

RECEIVED BY

Name: Tony Wong
Date: 3/7/17
Signature:
Time 4:04pm

METHOD OF SHIPMENT

Courier:
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Report: 552701/552720

COC Page 1 of 3

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F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
109	DUPLICATE3	Soil	3/7/17															
110	72e1.00m	Soil	3/7/17		0.0													
111	b1e0.15m	Soil	3/7/17		0.1					✓		✓						
112	b1e0.50m	Soil	3/7/17		0.0							✓						
113	b1e 1.00m	Soil	3/7/17		0.2													
114	b1e 1.50m	Soil	3/7/17		0.0													
115	b1e 2.00m	Soil	3/7/17		2.3													
116	b1e 2.50m	Soil	3/7/17		1.2							✓						
117	b1e 3.00m	Soil	3/7/17		0.9							✓						
118	S3e0.15m	Soil	3/7/17		0.4					✓		✓						
119	S3e0.50m	Soil	3/7/17		0.1							✓						
120	S3e 1.00m	Soil	3/7/17		0.3							✓						

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Y= Yes Analysis Required

Report: 552701 / 552720

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Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
121	53@1.50m	Soil	3/7/17		0.0						✓							
122	45@0.15m	Soil	3/7/17		0.0					✓		✓						
123	45@0.50m	Soil	3/7/17		00							✓						
124	45@1.00m	Soil	3/7/17		0.0													
125	45@1.50m	Soil	3/7/17		0.0													
126	45@2.00m	Soil	3/7/17		0.0													
127	45@2.50m	Soil	3/7/17		0.0							✓						
128	45@3.00m	Soil	3/7/17		0.3							✓						
129	DUPLICATE 4	Soil	3/7/17		0.							✓						
130	67@0.15m	Soil	3/7/17		0.0					✓		✓						
131	67@0.50m	Soil	3/7/17		0.0					✓		✓						
132	67@1.00m	Soil	3/7/17		0.0													

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Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
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Report: 552701 / 552720

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Geoaquitards Environmental ABN 80 683 110 579
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO.03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)
133	67@1.50m	Soil	3/7/17		0.0							
134	67@2.00m	Soil	3/7/17		0.0					✓		
135	67@2.50m	Soil	3/7/17		0.0							
136	67@3.00m	Soil	3/7/17		0.0							
137	60@0.15m	Soil	3/7/17		0.0							✓
138	60@0.50m	Soil	3/7/17		0.0							✓
139	60@1.00m	Soil	3/7/17		0.0							
140	60@1.50m	Soil	3/7/17		0.0							
141	60@2.00m	Soil	3/7/17		0.0							
142	60@2.50m	Soil	3/7/17		0.1							✓
143	60@3.00m	Soil	3/7/17		0.0							✓
144	52@0.15m	Soil	3/7/17		0.0							✓

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
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Report: 552701 | 552720

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Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 878 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
145	52@0.50m	Soil	3/7/17		0.0							✓						
146	52@1.00m	Soil	3/7/17		0.0					✓		✓						
147	52@1.50m	Soil	3/7/17		0.0													
148	52@2.00m	Soil	3/7/17		0.0							✓						
149	52@2.50m	Soil	3/7/17		0.0							✓						
150	52@3.00m	Soil	3/7/17		0.0							✓						
151	44@0.15m	Soil	3/7/17		0.0					✓								
152	44@0.50m	Soil	3/7/17		0.0													
153	44@1.00m	Soil	3/7/17		0.0													
154	44@1.50m	Soil	3/7/17		0.0													
155	44@2.00m	Soil	3/7/17		0.0					✓								
156	~~44@2.50m~~	Soil	3/7/17															

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
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Report: 552701/552720

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Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
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PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)							
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other													
157	57@0.15m	Soil	3/7/17		0.0					✓		✓							
158	57@0.50m	Soil	3/7/17		0.0							✓							
159	57@1.00m	Soil	3/7/17		0.0							✓							
160	57@1.50m	Soil	3/7/17		0.0														
161	57@2.00m	Soil	3/7/17		0.0														
162	57@2.50m	Soil	3/7/17		0.0							✓							
163	57@3.00m	Soil	3/7/17		0.0														
164	65@0.15m	Soil	3/7/17		0.0					✓		✓							
165	65@0.50m	Soil	3/7/17		0.0														
166	65@1.00m	Soil	3/7/17		0.0							✓							
167	65@1.50m	Soil	3/7/17		0.0														
168	65@2.00m	Soil	3/7/17		0.0							✓							

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Geoaquitards Environmental

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ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham.~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
169	65@2.50m	Soil	3/7/17		0.0					✓		✓						
170	65@3.00m	Soil	3/7/17		0.0							✓						
171	76@0.15m	Soil	3/7/17		0.0													
172	76@0.50m	Soil	3/7/17		0.0													
173	76@1.00m	Soil	3/7/17		0.0													
174	76@1.50m	Soil	3/7/17		0.0													
175	76@2.00m	Soil	3/7/17		0.0							✓						
176	76@2.50m	Soil	3/7/17		0.0							✓						
177	76@3.00m	Soil	3/7/17		0.0													
178	75@0.05m	Soil	3/7/17		0.0					✓		✓						
179	75@0.50m	Soil	3/7/17		0.0							✓						
180	75@1.00m	Soil	3/7/17		0.0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
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F (+61) (3) 9705 7948
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)	MEPH R20					
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
181	75@1.50m	Soil	3/7/17		0.0		✓						✓					
182	75@2.00m	Soil	3/7/17		0.0							✓						
183	75@2.50m	Soil	3/7/17		0.0							✓						
184	75@3.00m	Soil	3/7/17		0.0													
185	69@0.15m	Soil	3/7/17		0.0					✓								
186	69@0.50m	Soil	3/7/17		0.0							✓						
187	69@1.00m	Soil	3/7/17		0.0							✓						
188	69@1.50m	Soil	3/7/17		0.0													
189	69@2.00m	Soil	3/7/17		0.0							✓						
190	69@2.50m	Soil	3/7/17		0.0							✓						
191	69@3.00m	Soil	3/7/17		0.0					✓		✓						
192	64@0.15m	Soil	3/7/17		0.0					✓								

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Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wang	Date: 3/7/17	Courier:
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Report: 552701/552720

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Geoaquitards Environmental ABN 80 683 110 579
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F (+61) (3) 9705 7948
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)							
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other													
193	64C 0.50m	Soil	3/7/17		0.0							✓							
194	64C 1.00m	Soil	3/7/17		0.0							✓							
195	64C 1.50m	Soil	3/7/17		0.0														
196	64C 2.00m	Soil	3/7/17		0.2														
197	64C 2.50m	Soil	3/7/17		0.0							✓							
198	64C 3.00m	Soil	3/7/17		0.0														
199	56C 0.15m	Soil	3/7/17		0.0					✓		✓							
200	56C 0.50m	Soil	3/7/17		0.0							✓							
201	56C 1.00m	Soil	3/7/17		0.0														
202	56C 1.50m	Soil	3/7/17		0.0														
203	56C 2.00m	Soil	3/7/17		0.0							✓							
204	56C 2.50m	Soil	3/7/17		0.0														

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wang	Date: 3/7/17	Courier:
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Y= Yes Analysis Required

Report: 552701 / 552720

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Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: None)	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
205	56@2.00m	Soil	3/7/17		0.0							✓						
206	48@0.15m	Soil	3/7/17		0.0					✓		✓						
207	48@0.50m	Soil	3/7/17		0.0													
208	48@1.00m	Soil	3/7/17		0.0													
209	48@1.50m	Soil	3/7/17		0.0							✓						
210	48@2.00m	Soil	3/7/17		0.0							✓						
211	48@2.50m	Soil	3/7/17		0.0							✓						
212	48@3.00m	Soil	3/7/17		0.0							✓						
213	DUPLICATE5	Soil	3/7/17									✓						
214	DUPLICATE6	Soil	3/7/17									✓						
215	DUPLICATE7	Soil	3/7/17							✓		✓						
216	43@0.15m	Soil	3/7/17		0.0					✓								

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Leong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Normal

Job No: RM406-M.1

Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**

Date 3/07/2017

EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Leb ID	(PID) Comments	Other												
217	43E 0.50m	Soil	3/7/17		0.0													
218	43E 1.00m	Soil	3/7/17		0.0							✓						
219	43E 1.50m	Soil	3/7/17		0.0							✓						
220	43E 2.00m	Soil	3/7/17		0.0													
221	43E 2.50m	Soil	3/7/17		0.0							✓						
222	43E 3.00m	Soil	3/7/17		0.0					✓								
223	51E 0.15m	Soil	3/7/17		0.0													
224	51E 0.50m	Soil	3/7/17		0.0													
225	51E 1.00m	Soil	3/7/17		0.0													
226	51E 1.50m	Soil	3/7/17		0.0							✓						
227	51E 2.00m	Soil	3/7/17		0.0													
228	51E 2.50m	Soil	3/7/17		0.0		✓					✓						

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017

Signature: Time: 1:45

RECEIVED BY

Name: Tony Wong Date: 3/7/17

Signature: Time 4:04

METHOD OF SHIPMENT

Courier:

Hand Delivered:

Transport Co:

Postal

Y= Yes Analysis Required

Report: 552701 / 552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM408-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
229	51@ 3.00m	Soil	3/7/17		0.0							✓						
230	59@ 0.15m	Soil	3/7/17		0.0					✓		✓						
231	59@ 0.50m	Soil	3/7/17		0.0													
232	59@ 1.00m	Soil	3/7/17		0.0													
233	59@ 1.50m	Soil	3/7/17		0.0													
234	59@ 2.00m	Soil	3/7/17		0.0													
235	59@ 2.50m	Soil	3/7/17		0.0							✓						
236	59@ 3.00m	Soil	3/7/17		0.0													
237	70@ 0.15m	Soil	3/7/17		0.0							✓						
238	70@ 0.50m	Soil	3/7/17		0.0					✓		✓						
239	70@ 1.00m	Soil	3/7/17		0.0													
240	70@ 1.50m	Soil	3/7/17		0.0							✓						

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Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

Geoaquitards Environmental ABN 80 663 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Normal

Job No: RM406-M.1

Project: Sandringham Golf Driving Range- ~~20 Wangara Road, Sandringham~~ 20 Wangara Road, Sandringham

Date 3/07/2017

EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
241	70C 2.00m	Soil	3/7/17		0.0													
242	70C 2.50m	Soil	3/7/17		0.0							✓						
243	70C 3.00m	Soil	3/7/17		0.0							✓						
244	37C 0.15m	Soil	3/7/17		0.0							✓						
245	37C 0.50m	Soil	3/7/17		0.0													
246	37C 1.00m	Soil	3/7/17		0.0													
247	37C 1.50m	Soil	3/7/17		0.0													
248	37C 2.00m	Soil	3/7/17		0.0							✓						
249	37C 2.50m	Soil	3/7/17		0.0							✓						
250	37C 3.00m	Soil	3/7/17		0.0													
251	29C 0.15m	Soil	3/7/17		0.0							✓						
252	29C 0.50m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017

Signature: Time: 1:45

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Name: Tony Wong Date: 3/7/17

Signature: Time 4:04

METHOD OF SHIPMENT

Courier:

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Report: 552701 / 552720

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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL		Job No:	RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164		Project:	Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST		Date	3/07/2017
PHONE NO:03 9554 3258		EMAIL REPORT TO:geo@iprimus.com.au	Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678	FAX NO:03 9705 7948		
TURNAROUND TIME:	Normal	**ANALYSIS REQUIRED Including SUITES**	

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
253	29C 1.00m	Soil	3/7/17		0.0													
254	29C 1.50m	Soil	3/7/17		0.0													
255	29C 2.00m	Soil	3/7/17		0.0							✓						
256	29C 2.50m	Soil	3/7/17		0.0													
257	28C 0.15m	Soil	3/7/17		0.0							✓						
258	28C 0.50m	Soil	3/7/17		0.0													
259	28C 1.00m	Soil	3/7/17		0.0													
260	28C 1.50m	Soil	3/7/17		0.0													
261	28C 2.00m	Soil	3/7/17		0.0							✓						
262	28C 2.50m	Soil	3/7/17		0.0													
263	28C 3.00m	Soil	3/7/17		0.0							✓						
264	36C 0.15m	Soil	3/7/17		0.0													

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Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
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Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM408-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO: geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: None	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(pID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
265	36C 0.50m	Soil	3/7/17		0.0							✓						
266	36C 1.00m	Soil	3/7/17		0.0													
267	36C 1.50m	Soil	3/7/17		0.0													
268	36C 2.00m	Soil	3/7/17		0.0							✓						
269	36C 2.50m	Soil	3/7/17		0.0							✓						
270	36C 3.00m	Soil	3/7/17		0.0							✓						
271	DUPLICATE 8	Soil	3/7/17									✓						
272	35C 0.15m	Soil	3/7/17		0.0							✓						
273	35C 0.50m	Soil	3/7/17		0.0							✓						
274	35C 1.00m	Soil	3/7/17		0.0													
275	35C 1.50m	Soil	3/7/17		0.0				✓									
276	35C 2.00m	Soil	3/7/17		0.0							✓						

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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL		Job No:	RM408-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164		Project:	Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST		Date	3/07/2017
PHONE NO:03 9554 3258		EMAIL REPORT TO:geo@iprimus.com.au	Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678	FAX NO:03 9705 7948		
TURNAROUND TIME:	Normal	ANALYSIS REQUIRED including SUITES	

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	Comments (PID)	Other												
277	35@2.50m	Soil	3/7/17		0.0							✓						
278	35@3.00m	Soil	3/7/17		0.0							✓						
279	34@0.15m	Soil	3/7/17		0.0													
280	34@0.50m	Soil	3/7/17		0.0													
281	34@1.00m	Soil	3/7/17		0.0													
282	34@1.50m	Soil	3/7/17		0.0													
283	34@2.00m	Soil	3/7/17		0.0							✓						
284	34@2.50m	Soil	3/7/17		0.0							✓						
285	34@3.00m	Soil	3/7/17		0.0													
286	41@0.15m	Soil	3/7/17		0.0							✓						
287	41@0.50m	Soil	3/7/17		0.0							✓						
288	41@1.00m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
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Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL		Job No:	RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164		Project:	Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ 20 Wangara Road, Sandringham
CONTACT NAME: EMMANUEL ERNEST		Date	3/07/2017
PHONE NO:03 9554 3258		EMAIL REPORT TO:geo@iprimus.com.au	Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678	FAX NO:03 9705 7948		
TURNAROUND TIME:	Normal	ANALYSIS REQUIRED including SUITES	

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
289	41E1.50m	Soil	3/7/17		0.0													
290	41E2.00m	Soil	3/7/17		0.0													
291	41E2.50m	Soil	3/7/17		0.0													
292	41E3.00m	Soil	3/7/17		0.0													
293	49E0.15m	Soil	3/7/17		0.0							✓						
294	49E0.50m	Soil	3/7/17		0.0							✓						
295	49E1.00m	Soil	3/7/17		0.0													
296	49E1.50m	Soil	3/7/17		0.0													
297	49E2.00m	Soil	3/7/17		0.0													
298	49E2.50m	Soil	3/7/17		0.0							✓						
299	49E3.00m	Soil	3/7/17		0.0													
300	42E0.15m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
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Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
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Y= Yes Analysis Required

Report: 552701/552720

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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wangara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Norma	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)							
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other													
301	42C0.50m	Soil	3/7/17		0-0														
302	42C1.00m	Soil	3/7/17		0-0														
303	42C1.50m	Soil	3/7/17		0-0														
304	42C2.00m	Soil	3/7/17		0-0														
305	42C2.50m	Soil	3/7/17		0.0							✓							
306	42C3.00m	Soil	3/7/17		0.0							✓							
307	50C0.15m	Soil	3/7/17		0.0														
308	50C0.50m	Soil	3/7/17		0.0														
309	50C1.00m	Soil	3/7/17		0-0			✓											
310	50C1.50m	Soil	3/7/17		0.0														
311	50C2.00m	Soil	3/7/17		0-0														
312	50C2.50m	Soil	3/7/17		0-0							✓							

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
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Report: 552701/552720

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Geoaquitards Environmental ABN 80 663 110 579
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Norma

Job No: RM406-M.1

Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**

Date 3/07/2017

EMAIL REPORT TO geo@iprimus.com.au Attention: Emmanuel Ernest

ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	PID Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
313	50@3.00m	Soil	3/7/17		0.0				✓									
314	58@0.15m	Soil	3/7/17		0.0							✓						
315	58@0.50m	Soil	3/7/17		0.0							✓						
316	58@1.00m	Soil	3/7/17		0.0							✓						
317	58@1.50m	Soil	3/7/17		0.0													
318	58@2.00m	Soil	3/7/17		0.0													
319	58@2.50m	Soil	3/7/17		0.0		✓											
320	58@3.00m	Soil	3/7/17		0.0													
321	66@0.15m	Soil	3/7/17		0.0													
322	66@0.50m	Soil	3/7/17		0.0													
323	66@1.00m	Soil	3/7/17		0.0													
324	66@1.50m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017

Signature: Time: 1:45

RECEIVED BY

Name: Tony Wong Date: 3/7/17

Signature: Time 4:04

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COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
325	bbC2.00m	Soil	3/7/17		0.0													
326	bbC 2.50m	Soil	3/7/17		0.0													
327	bbC3.00m	Soil	3/7/17		0.0													
328	80@0.15m	Soil	3/7/17		0.0							✓						
329	80@0.50m	Soil	3/7/17		0.0							✓						
330	80@1.00m	Soil	3/7/17		0.0													
331	80@1.50m	Soil	3/7/17		0.0													
332	80@2.00m	Soil	3/7/17		0.0													
333	80@2.50m	Soil	3/7/17		0.0													
334	80@3.00m	Soil	3/7/17		0.0													
335	79@ 0.15m	Soil	3/7/17		0.0													
336	79@ 0.50m	Soil	3/7/17		0.0													

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Y= Yes Analysis Required

Report: 552701/552720

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ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham.~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	PID Comments	Other												
337	79E1.00m	Soil	3/7/17		0.0							✓						
338	79E1.50m	Soil	3/7/17		0.0													
339	79E2.00m	Soil	3/7/17		0.0													
340	79E2.50m	Soil	3/7/17		0.0													
341	79E3.00m	Soil	3/7/17		0.0							✓						
342	78E0.15m	Soil	3/7/17		0.0							✓						
343	78E0.50m	Soil	3/7/17		0.0							✓						
344	78E1.00m	Soil	3/7/17		0.0													
345	78E1.50m	Soil	3/7/17		0.0													
346	78E2.00m	Soil	3/7/17		0.0													
347	71E0.15m	Soil	3/7/17		0.0													
348	71E0.50m	Soil	3/7/17		0.0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Norma	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
349	71C1.00m	Soil	3/7/17		0.0													
350	71C1.50m	Soil	3/7/17		0.0													
351	71C2.00m	Soil	3/7/17		0.0													
352	71C2.50m	Soil	3/7/17		0.0							✓						
353	12C0.15m	Soil	3/7/17		0.0							✓						
354	12C0.50m	Soil	3/7/17		0.0													
355	12C1.00m	Soil	3/7/17		0.0													
356	12C1.50m	Soil	3/7/17		0.0													
357	12C2.00m	Soil	3/7/17		0.0													
358	12C2.50m	Soil	3/7/17		0.0													
359	12C3.00m	Soil	3/7/17		0.0													
360	13C0.15m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1.45	Signature:	Time 4.04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

COC Page 30 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM408-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

No	SAMPLE ID	MATRIX	DATE	Lab ID	CONTAINER INFORMATION (PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
361	13@0.50m	Soil	3/7/17		0.0							✓						
362	13@1.00m	Soil	3/7/17		0.0													
363	13@1.50m	Soil	3/7/17		0.0													
364	13@2.00m	Soil	3/7/17		0.0				✓									
365	13@2.50m	Soil	3/7/17		0.0													
366	13@3.00m	Soil	3/7/17		0.0							✓						
367	21@0.15m	Soil	3/7/17		0.0							✓						
368	21@0.50m	Soil	3/7/17		0.0													
369	21@1.00m	Soil	3/7/17		0.0													
370	21@1.50m	Soil	3/7/17		0.0													
371	21@2.00m	Soil	3/7/17		0.0													
372	21@2.50m	Soil	3/7/17		0.0				✓									

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:41	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report - 552701 / 552720

Geoaquitards Environmental ABN 80 663 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 878

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
373	21@3.00m	Soil	3/7/17		0.0													
374	22@0.15m	Soil	3/7/17		0.0							✓						
375	22@0.50m	Soil	3/7/17		0.0							✓						
376	22@1.00m	Soil	3/7/17		0.0													
377	22@1.50m	Soil	3/7/17		0.0													
378	22@2.00m	Soil	3/7/17		0.0													
379	22@2.50m	Soil	3/7/17		0.0													
380	23@3.00m	Soil	3/7/17		0.0							✓						
381	20@0.15m	Soil	3/7/17		0.0							✓						
382	20@0.50m	Soil	3/7/17		0.0							✓						
383	20@1.00m	Soil	3/7/17		0.0													
384	20@1.50m	Soil	3/7/17		0.0				✓									

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552702 / 552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	**ANALYSIS REQUIRED including SUITES**

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
385	20E2.00m	Soil	3/7/17		0.0													
386	20E2.50m	Soil	3/7/17		0.0													
387	20E3.00m	Soil	3/7/17		0.0													
388	83E0.15m	Soil	3/7/17		0.0							✓						
389	83E0.50m	Soil	3/7/17		0.0							✓						
390	83E1.00m	Soil	3/7/17		0.0							✓						
391	83E1.50m	Soil	3/7/17		0.0													
392	83E2.00m	Soil	3/7/17		0.0													
393	83E2.50m	Soil	3/7/17		0.0													
394	83E3.00m	Soil	3/7/17		0.0													
395	82E0.15m	Soil	3/7/17		0.0							✓						
396	82E0.50m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

Geoaquitards Environmental ABN 60 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wangara Road, Sandringham.~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:gec@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)							
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other													
397	S2C 0.00m	Soil	3/7/17		0.0														
398	S2C 1.50m	Soil	3/7/17		0.0														
399	S2C 2.00m	Soil	3/7/17		0.0		✓												
400	S2C 2.50m	Soil	3/7/17		0.0														
401	S2 C 3.00m	Soil	3/7/17		0.0							✓							
402	S1 C 0.15m	Soil	3/7/17		0.0							✓							
403	S1 C 0.50m	Soil	3/7/17		0.0														
404	S1C 1.00m	Soil	3/7/17		0.0														
405	S1C 1.50m	Soil	3/7/17		0.0														
406	S1C 2.00m	Soil	3/7/17		0.0														
407	S1C 2.50m	Soil	3/7/17		0.0														
408	S1C 3.00m	Soil	3/7/17		0.0														

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: None	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
409	84C0-15m	Soil	3/7/17		0.0							✓						
410	84C0.50m	Soil	3/7/17		0.0							✓						
411	84C 1.00m	Soil	3/7/17		0.0													
412	84C1.50m	Soil	3/7/17		0.0													
413	84C2.00m	Soil	3/7/17		0.0													
414	84C2.50m	Soil	3/7/17		0.0													
415	84C3.00m	Soil	3/7/17		0.0													
416	85C0.15m	Soil	3/7/17		0.0							✓						
417	85C0.50m	Soil	3/7/17		0.0							✓						
418	85C1.00m	Soil	3/7/17		0.0													
419	85C1.50m	Soil	3/7/17		0.0													
420	85C2.00m	Soil	3/7/17		0.0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701/552726

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM408-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham.~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3256	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Norma	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No. Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
421	85E2.50m	Soil	3/7/17		0.0													
422	85E3.00m	Soil	3/7/17		0.0													
423	77E0.15m	Soil	3/7/17		0.0													
424	77E0.50m	Soil	3/7/17		0.0													
425	77E1.00m	Soil	3/7/17		0.0													
426	77E1.50m	Soil	3/7/17		0.0													
427	77E2.00m	Soil	3/7/17		0.0													
428	77E2.50m	Soil	3/7/17		0.0													
429	77E3.00m	Soil	3/7/17		0.0							✓						
430	27E0.15m	Soil	3/7/17		0.0							✓						
431	27E0.50m	Soil	3/7/17		0.0													
432	27E1.00m	Soil	3/7/17		0.0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 11.45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701/552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Normal

Job No: RM406-M.1

Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**

Date 3/07/2017

EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES

Secondary Lab Address

Nc Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
433	27C 1.50m	Soil	3/7/17		0.0													
434	27C 2.00m	Soil	3/7/17		0.0													
435	27C 2.50m	Soil	3/7/17		0.0													
436	27C 3.00m	Soil	3/7/17		0.0													
437	19C 0.15m	Soil	3/7/17		0.0							✓						
438	19C 0.50m	Soil	3/7/17		0.0							✓						
439	19C 1.00m	Soil	3/7/17		0.0													
440	19C 1.50m	Soil	3/7/17		0.0													
441	19C 2.00m	Soil	3/7/17		0.0													
442	19C 2.50m	Soil	3/7/17		0.0													
443	19C 3.00m	Soil	3/7/17		0.0													
444	18C 0.15m	Soil	3/7/17		0.0							✓						

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017

Signature: Time: 1:45

RECEIVED BY

Name: Tony Dong Date: 3/7/17

Signature: Time 4:04

METHOD OF SHIPMENT

Courier:

Hand Delivered:

Transport Co:

Postal

Y= Yes Analysis Required

Report: 552701 / 552720

COC Page 37 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
445	18@0.50m	Soil	3/7/17		0.0							✓						
446	18@1.00m	Soil	3/7/17		0.0													
447	18@1.50m	Soil	3/7/17		0.0													
448	18@2.00m	Soil	3/7/17		0.0													
449	18@2.50m	Soil	3/7/17		0.0													
450	18@3.00m	Soil	3/7/17		0.0													
451	26@0.15m	Soil	3/7/17		0.0							✓						
452	26@0.50m	Soil	3/7/17		0.0							✓						
453	26@1.00m	Soil	3/7/17		0.0													
454	26@1.50m	Soil	3/7/17		0.0													
455	26@2.00m	Soil	3/7/17		0.0													
456	26@2.50m	Soil	3/7/17		0.0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701/552720

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
457	26@3.00m	Soil	3/7/17		0.0													
458	14@0.15m	Soil	3/7/17		0-0							✓						
459	14@0.50m	Soil	3/7/17		0-0							✓						
460	14@1.00m	Soil	3/7/17		0.0													
461	14@1.50m	Soil	3/7/17		0-0													
462	14@2.00m	Soil	3/7/17		0.0													
463	14@2.50m	Soil	3/7/17		0.0													
464	14@3.00m	Soil	3/7/17		0.0													
465	15@0.15m	Soil	3/7/17		0.0							✓						
466	15@0.50m	Soil	3/7/17		0.0							✓						
467	15@1.00m	Soil	3/7/17		0.0													
468	15@1.50m	Soil	3/7/17		0.0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 | 552720

Geoaquitards Environmental ABN 80 683 110 579
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CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)							
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other													
469	15C2.00m	Soil	3/7/17		0-0														
470	15C2.50m	Soil	3/7/17		0-0														
471	15C3.00m	Soil	3/7/17		0-0														
472	17C0.15m	Soil	3/7/17		0.0							✓							
473	17C0.50m	Soil	3/7/17		0.0							✓							
474	17C1.00m	Soil	3/7/17		0.0														
475	17C1.50m	Soil	3/7/17		0.0														
476	17C2.00m	Soil	3/7/17		0.0														
477	17C2.50m	Soil	3/7/17		0.0														
478	17C3.00m	Soil	3/7/17		0-0														
479	25C0.15m	Soil	3/7/17		0-0							✓							
480	25C0.50m	Soil	3/7/17		0-0							✓							

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wang	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701/552720

COC Page 40 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL

ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164

CONTACT NAME: EMMANUEL ERNEST

PHONE NO:03 9554 3258

MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948

TURNAROUND TIME: Normal

Job No: RM406-M.1

Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**

Date 3/07/2017

EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest

ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
481	25@1.00m	Soil	3/7/17		0.0													
482	25@1.50m	Soil	3/7/17		0.0													
483	25@2.00m	Soil	3/7/17		0.0													
484	25@2.50m	Soil	3/7/17		0.0													
485	25@3.00m	Soil	3/7/17		0.0													
486	23@0.15m	Soil	3/7/17		0.0							✓						
487	23@0.50m	Soil	3/7/17		0.0							✓						
488	23@1.00m	Soil	3/7/17		0.0													
489	23@1.50m	Soil	3/7/17		0.0													
490	23@2.00m	Soil	3/7/17		0.0													
491	23@2.50m	Soil	3/7/17		0.0			✓	✓									
492	23@3.00m	Soil	3/7/17		0.0													

RELINQUISHED BY:

Name: EMMANUEL ERNEST Date: 3/07/2017

Signature: Time: 1:45

RECEIVED BY

Name: Tony Wong Date: 3/7/17

Signature: Time 4.04

METHOD OF SHIPMENT

Courier:

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Transport Co:

Postal

Y= Yes Analysis Required

Report: 552701 / 552720, 552759

COC Page 4 of 93

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Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~20 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)						
No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other												
493	16C 0-15m	Soil	3/7/17		0-0							✓						
494	16C 0.50m	Soil	3/7/17		0-0													
495	16C 1.00m	Soil	3/7/17		0-0													
496	16C 1.50m	Soil	3/7/17		0-0													
497	16C 2.00m	Soil	3/7/17		0-0		✓											
498	16C 2.50m	Soil	3/7/17		0-0		✓											
499	16C 3.00m	Soil	3/7/17		0-0							✓						
500	24C 0.15m	Soil	3/7/17		0-0							✓						
501	24C 0.50m	Soil	3/7/17		0-0													
502	24C 1.00m	Soil	3/7/17		0-0													
503	24C 1.50m	Soil	3/7/17		0-0													
504	24C 2.00m	Soil	3/7/17		0-0													

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45pm	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 / 552759.

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Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- ~~26 Wandgara Road, Sandringham~~ **20 Wangara Road, Sandringham**
CONTACT NAME: EMMANUEL ERNEST	Date 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFORMATION

No	SAMPLE ID	MATRIX	DATE	Lab ID	(PID) Comments	Other	IWRG 621 Screens	R 21	B4A	Asbestos	B7	M12 Screen (IWRG Metal Screen)	C6–C9					
505	24C2-50m	Soil	3/7/17		0.0							✓						
506	24C3.00m	Soil	3/7/17		0.0							✓						
507	Rinsate	Soil	3/7/17									✓						
508	Trip	Soil	3/7/17									✓	✓					
509		Soil	3/7/17															
510		Soil	3/7/17															
511		Soil	3/7/17															
512		Soil	3/7/17															
513		Soil	3/7/17															
514		Soil	3/7/17															
515		Soil	3/7/17															
516		Soil	3/7/17															

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: Tony Wong	Date: 3/7/17	Courier:
				Hand Delivered:
Signature:	Time: 1:45pm	Signature:	Time 4:04	Transport Co:
				Postal

Y= Yes Analysis Required

Report: 552701 (~~552720~~.

COC Page 43 of 43

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**Geoaquitards Environmental**
Contact name:	Emmanuel Ernest
Project name:	SANDRINGHAM GOLF DRIVING RANGE - 20 WANGARA ROAD
Project ID:	RM406-M.1
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jul 3, 2017 4:04 PM
Eurofins | mgt reference:	**552701**

Sample information

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

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

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

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

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ 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:

Mary Makarios on Phone : +61 3 8564 5000 or by e.mail: MaryMakarios@eurofins.com

Results will be delivered electronically via e.mail to Emmanuel Ernest - geo@geoaquitards.com.au.

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
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Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	73 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02188	X								
2	73 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02189			X	X					
3	73 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02190			X	X					
4	73 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02191				X			X		
5	73 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02192			X	X					
6	68 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02193	X		X	X					
7	68 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02194			X	X					
8	68 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02195				X			X		
9	68 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02196			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
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Sydney
Unit F3, Building F
16 Mars Road
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Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
10	62 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02197	X		X	X					
11	62 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02198			X	X					
12	62 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02199				X			X		
13	54 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02200	X		X	X					
14	54 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02201			X	X					
15	54 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02202			X	X					
16	54 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02203				X			X		
17	54 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02204			X	X					
18	DUPLICATE 1	Jul 03, 2017		Soil	M17-Jl02205			X	X					
19	74 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02206	X		X	X					
20	74 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02207			X	X					
21	74 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02208			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
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1/21 Smallwood Place
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Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
22	63 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02209			X	X					
23	63 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02210			X	X					
24	63 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02211			X	X					
25	63 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02212				X			X		
26	63 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02213	X								
27	63 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02214			X	X					
28	55 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02215			X	X					
29	55 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02216	X								
30	55 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02217			X	X					
31	55 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02218			X	X					
32	47 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02219			X	X					
33	47 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02220				X			X		

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
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NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
34	47 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02221	X								
35	47 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02222			X	X					
36	46 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02223			X	X					
37	46 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02224			X	X					
38	46 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02225	X								
39	46 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02226			X	X					
40	38 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02227			X	X					
41	38 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02228			X	X					
42	38 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02229	X								
43	31 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02230			X	X					
44	31 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02231			X	X					
45	31 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02232	X								

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
46	31 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02233			X	X					
47	30 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02234			X	X					
48	30 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02235			X	X					
49	30 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02236	X								
50	30 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02237			X	X					
51	DUPLICATE 2	Jul 03, 2017		Soil	M17-Jl02238			X	X					
52	39 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02239			X	X					
53	39 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02240			X	X					
54	39 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02241			X	X					
55	39 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02242	X								
56	39 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02243			X	X					
57	32 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02244			X	X					

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
58	32 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02245			X	X					
59	32 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02246	X								
60	32 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02247			X	X					
61	33 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02248			X	X					
62	33 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02249			X	X					
63	33 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02250			X	X					
64	33 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02251	X								
65	33 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02252			X	X					
66	40 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02253			X	X					
67	40 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02254				X	X				
68	40 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02255			X	X					
69	72 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02256			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
70	72 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02257			X	X					
71	61 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02258	X		X	X					
72	61 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02259			X	X					
73	61 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02260			X	X					
74	53 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02261	X		X	X					
75	53 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02262			X	X					
76	53 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02263			X	X					
77	45 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02264	X		X	X					
78	45 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02265			X	X					
79	45 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02266			X	X					
80	DUPLICATE 4	Jul 03, 2017		Soil	M17-Jl02267			X	X					
81	67 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02268			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
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Perth
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Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
82	67 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02269	X		X	X					
83	67 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02270	X								
84	60 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02271			X	X					
85	60 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02272			X	X					
86	60 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02273			X	X					
87	52 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02274			X	X					
88	52 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02275			X	X					
89	52 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02276	X		X	X					
90	52 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02277			X	X					
91	52 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02278			X	X					
92	44 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02279	X								
93	44 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02280	X								

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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
94	57 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02281	X		X	X					
95	57 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02282			X	X					
96	57 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02283			X	X					
97	57 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02284			X	X					
98	65 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02285	X		X	X					
99	65 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02286			X	X					
100	65 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02287			X	X					
101	65 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02288	X		X	X					
102	65 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02289			X	X					
103	76 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02290			X	X					
104	75 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02291	X		X	X					
105	75 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02292			X	X					

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
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Oakleigh VIC 3166
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NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
106	75 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02293				X	X				
107	75 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02294			X	X					
108	75 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02295			X	X					
109	69 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02296	X								
110	69 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02297			X	X					
111	69 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02298			X	X					
112	69 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02299			X	X					
113	69 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02300			X	X					
114	69 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02301			X	X					
115	64 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02302	X								
116	64 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02303			X	X					
117	64 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02304			X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
118	64 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02305			X	X					
119	56 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02306	X		X	X					
120	56 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02307			X	X					
121	56 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02308			X	X					
122	56 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02309			X	X					
123	48 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02310	X		X	X					
124	48 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02311			X	X					
125	48 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02312			X	X					
126	48 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02314			X	X					
127	DUPLICATE 5	Jul 03, 2017		Soil	M17-Jl02315			X	X					
128	DUPLICATE 6	Jul 03, 2017		Soil	M17-Jl02316			X	X					
129	DUPLICATE 7	Jul 03, 2017		Soil	M17-Jl02317			X	X					

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Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
130	43 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02318	X								
131	43 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02319			X	X					
132	43 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02320			X	X					
133	43 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02321			X	X					
134	51 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02322	X								
135	51 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02323			X	X					
136	51 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02324				X				X	
137	51 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02325			X	X					
138	59 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02326	X		X	X					
139	59 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02327			X	X					
140	70 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02328			X	X					
141	70 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02329	X		X	X					

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

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Priority: 5 Day
Contact Name: Emmanuel Ernest

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Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
142	70 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02330			X	X					
143	70 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02331			X	X					
144	37 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02332			X	X					
145	37 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02333			X	X					
146	37 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02334			X	X					
147	29 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02335			X	X					
148	29 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02336			X	X					
149	29 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02337			X	X					
150	28 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02338			X	X					
151	28 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02339			X	X					
152	28 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02340			X	X					
153	36 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02341			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
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Phone : +61 7 3902 4600
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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
154	36 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02342			X	X					
155	36 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02343			X	X					
156	36 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02344			X	X					
157	36 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02345			X	X					
158	DUPLICATE 8	Jul 03, 2017		Soil	M17-Jl02346			X	X					
159	35 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02347			X	X					
160	35 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02348			X	X					
161	35 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02349				X					X
162	35 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02350			X	X					
163	35 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02351			X	X					
164	35 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02352			X	X					
165	34 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02353			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
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NATA # 1261
Site # 1254 & 14271

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Unit F3, Building F
16 Mars Road
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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
166	41 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02354			X	X					
167	41 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02355			X	X					
168	41 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02356			X	X					
169	49 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02357			X	X					
170	49 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02358			X	X					
171	49 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02359			X	X					
172	42 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02360			X	X					
173	42 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02361			X	X					
174	42 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02362			X	X					
175	50 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02363				X		X			
176	50 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02364			X	X					
177	50 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02365				X					X

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
178	58 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02366			X	X					
179	58 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02367			X	X					
180	58 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02368			X	X					
181	58 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02369				X				X	
182	66 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02370			X	X					
183	80 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02371			X	X					
184	80 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02372			X	X					
185	79 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02373			X	X					
186	79 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02374			X	X					
187	78 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02375			X	X					
188	78 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02376			X	X					
189	71 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02377			X	X					

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
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Phone : +61 7 3902 4600
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Perth
2/91 Leach Highway
Kewdale WA 6105
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Dandenong Sth
VIC 3175

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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
190	12 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02378			X	X					
191	13 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02379			X	X					
192	13 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02380			X	X					
193	13 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02381				X					X
194	13 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02382			X	X					
195	21 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02383			X	X					
196	21 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02384				X					X
197	22 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02385			X	X					
198	22 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02386			X	X					
199	22 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02387			X	X					
200	20 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02388			X	X					
201	20 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02389			X	X					

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
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Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
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Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
202	20 @ 1.50M	Jul 03, 2017		Soil	M17-Jl02390				X					X
203	83 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02391			X	X					
204	83 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02392			X	X					
205	83 @ 1.00M	Jul 03, 2017		Soil	M17-Jl02393			X	X					
206	82 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02394			X	X					
207	82 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02395			X	X					
208	82 @ 2.00M	Jul 03, 2017		Soil	M17-Jl02396				X				X	
209	82 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02397			X	X					
210	81 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02398			X	X					
211	84 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02399			X	X					
212	84 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02400			X	X					
213	85 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02401			X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
214	85 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02402			X	X					
215	77 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02403			X	X					
216	27 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02404			X	X					
217	19 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02405			X	X					
218	19 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02406			X	X					
219	18 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02407			X	X					
220	18 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02408			X	X					
221	26 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02409			X	X					
222	26 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02410			X	X					
223	14 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02411			X	X					
224	14 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02412			X	X					
225	15 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02413			X	X					

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
226	15 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02414			X	X					
227	17 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02415			X	X					
228	17 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02416			X	X					
229	25 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02417			X	X					
230	25 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02418			X	X					
231	23 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02419			X	X					
232	23 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02420			X	X					
233	23 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02421				X		X			X
234	16 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02422			X	X					
235	16 @ 0.50M	Jul 03, 2017		Soil	M17-Jl02423			X	X					
236	16 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02424				X				X	
237	16 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02425			X	X					

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NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 552701
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 3, 2017 4:04 PM
Due: Jul 10, 2017
Priority: 5 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Asbestos Absence /Presence	TRH C6-C9	IWRG 621 Metals : Metals M12	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins | mgt Suite B7	Vic EPA IWRG 621 (Solids)	Eurofins | mgt Suite B4A
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X								
Brisbane Laboratory - NATA Site # 20794											X			
Perth Laboratory - NATA Site # 18217														
238	24 @ 0.15M	Jul 03, 2017		Soil	M17-Jl02426			X	X					
239	24 @ 2.50M	Jul 03, 2017		Soil	M17-Jl02427			X	X					
240	24 @ 3.00M	Jul 03, 2017		Soil	M17-Jl02428			X	X					
241	RINSATE	Jul 03, 2017		Water	M17-Jl02564			X						
242	TRIP	Jul 03, 2017		Water	M17-Jl02565		X							
Test Counts						35	1	204	222	2	2	6	4	6

CHAIN OF CUSTODY DOCUMENTATION Quote #170619GEO

Geoaquitards Environmental

COMPANY NAME: GEOAQUITARDS ENVIRONMENTAL	Job No: RM406-M.1
ADDRESS / OFFICE: PO BOX 4040 DANDENONG SOUTH VIC 3164	Project: Sandringham Golf Driving Range- 20 Wandgara Road, Sandringham
CONTACT NAME: EMMANUEL ERNEST	Date: 3/07/2017
PHONE NO:03 9554 3258	EMAIL REPORT TO:geo@iprimus.com.au Attention: Emmanuel Ernest
MOBILE NO : 03 0434 890 678 FAX NO:03 9705 7948	
TURNAROUND TIME: Normal	ANALYSIS REQUIRED Including SUITES

SPECIAL DIRECTIONS & COMMENTS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Secondary Lab Address

No Total Number of samples

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		M12 Screen (IWRG Metal Screen)
No	SAMPLE ID	MATRIX	DATE	Lab ID	Comments	Other	
1	SPLIT1	Soil	3/7/17				✓
2	SPLIT2	Soil	3/7/17				✓
3	SPLIT3	Soil	3/7/17				✓
4	SPLIT4	Soil	3/7/17				✓
5	SPLIT5	Soil	3/7/17				✓
6	SPLIT6	Soil	3/7/17				✓
7	SPLIT7	Soil	3/7/17				✓
8	SPLIT8	Soil	3/7/17				✓
9		Soil	3/7/17				
10		Soil	3/7/17				
11		Soil	3/7/17				
12		Soil	3/7/17				

Environmental Division
Melbourne
Work Order Reference
EM1708657

Telephone + 61-3-8549 9600

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: EMMANUEL ERNEST	Date: 3/07/2017	Name: [illegible] AUS	Date: 3/7	Courier:
				Hand Delivered: Y
Signature: [signature]	Time: 1:45pm	Signature:	Time 16:30	Transport Co:
				Postal

Y= Yes Analysis Required

M12 Screen - IWRG 621 Metals (As,Cd,Cr,Cu,Ni,Pb,Zn,Hg,Mo,Se,Ag,Sn)

COC Page 1 of 1

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 49, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258
F (+61) (3) 9705 7948
M 0434 890 678

Enviro Sample Vic

From: GE <geo@geoaquitards.com.au>
Sent: Wednesday, 12 July 2017 5:17 PM
To: Enviro Sample Vic
Cc: Mary Makarios
Subject: 3 Days Turaround Additional ASLP tests from Eurofins | mgt Test Results - Report 552701 : Site SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD (RM406-M.1)

Hi Tony

Could you please undertake 3 days turnaround ASLP test for the following samples:

- Test location 48 @ 3.0m - ASLP for lead, arsenic, cadmium, copper, nickel, tin, zinc;
- Test location 68 @ 0.50m - ASLP for benzo pyrene

J102314. - 9389
~~J102194.~~ -
J102194 - 9333.

Regards
EMMANUEL ERNEST
Senior Environmental Scientist
MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

To Contact **Geoaquitards Environmental**:
ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 23, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258 F (+61) (3) 9705 7948 M 0434 890 678
e-mail: geoaquitards@iprimus.com.au

Geoaquitards Environmental

From: MaryMakarios@eurofins.com [mailto:MaryMakarios@eurofins.com]
Sent: Tuesday, 11 July 2017 6:21 PM
To: geo@geoaquitards.com.au
Subject: Eurofins | mgt Test Results - Report 552701 : Site SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD (RM406-M.1)

Regards

Mary Makarios
Analytical Services Manager

Eurofins | mgt
2-5 Kingston Town Close
OAKLEIGH VIC 3166
AUSTRALIA
Phone: +61 385 645 088

M.F
553942
12/7 5:17PM.

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

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**Geoaquitards Environmental**
Contact name:	Emmanuel Ernest
Project name:	SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID:	RM406-M.1
COC number:	Not provided
Turn around time:	3 Day
Date/Time received:	Jul 12, 2017 5:17 PM
Eurofins | mgt reference:	**553942**

Sample information

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

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

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

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

☑ Appropriate sample containers have been used.

☒ 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:

Mary Makarios on Phone : +61 3 8564 5000 or by e.mail: MaryMakarios@eurofins.com

Results will be delivered electronically via e.mail to Emmanuel Ernest - geo@geoaquitards.com.au.

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
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NATA # 1261
Site # 18217

Company Name: Geoaquitards Environmental
Address: PO Box 4040
Dandenong Sth
VIC 3175

Order No.:
Report #: 553942
Phone: 03 9554 3258
Fax: 03 9705 7948

Received: Jul 12, 2017 5:17 PM
Due: Jul 17, 2017
Priority: 3 Day
Contact Name: Emmanuel Ernest

Project Name: SANDRINGHAM GOLF DRIVING RANGE - 20 WANDGARA ROAD
Project ID: RM406-M.1

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Arsenic	Benzo(a)pyrene	Cadmium	Copper	Lead	Nickel	Tin	Zinc	AUS Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 18217														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	48@3.0M	Jul 03, 2017		AUS Leachate	M17-Jl13566	X		X	X	X	X	X	X	X
2	68@0.5M	Jul 03, 2017		AUS Leachate	M17-Jl13567		X							X
Test Counts						1	1	1	1	1	1	1	1	2

APPENDIX H

LABORATORY DATA PRESENTATION TABLES FOR SOIL

Geoaquitards Environmental

							OCP		BTEX						Chlorinated Hydrocarbons																														Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
							Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL									0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5			0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil																																																			10										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									120	5300	18000			15000																																															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																													
0-1m									NL	NL	NL			NL																																															
1-2m									NL	NL	NL			NL																																															
2-4m									NL	NL	NL			NL																																															
Csat									360	64	560			300																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																													
0-1m				Human health					NL	NL	NL			NL																																															
1-2m									NL	NL	NL			NL																																															
2-4m									NL	NL	NL			NL																																															
Csat									440	69	640			330																																															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																													
0-1m									NL	NL	NL			NL																																															
1-2m									NL	NL	NL			NL																																															
2-4m									NL	NL	NL			NL																																															
Csat									430	68	630			330																																															
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																																													
ANZECC 1992																																																													
US EPA ECO-SSL																																																													
CSQG Residential/Parkland Use				Maintenance of (highly modified) ecosystems.														5																																											
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									65		105																																																	
0-2m										125				45																																															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																													
0-2m									50	70	85			105																																															
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																							
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	0.545	0.42	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.07	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-Jl02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-Jl02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-Jl02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-Jl02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-Jl02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-Jl02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-Jl02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-Jl02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-Jl02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-Jl02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-Jl02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-Jl02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-Jl02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-Jl02390	552701	1.50 M	FILL, silty SAND		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5
21 @ 0.15M	3/07/2017	M17-Jl02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-Jl02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-Jl02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-Jl02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-Jl02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-Jl02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-Jl02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-Jl02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-Jl02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-Jl02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-Jl02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-Jl02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-Jl02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-Jl02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-Jl02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-Jl02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-Jl02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-Jl02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-Jl02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-Jl02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-Jl02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-Jl02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-Jl02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-Jl02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-Jl02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-Jl02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-Jl02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-Jl02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-Jl02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-Jl02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-Jl02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-Jl02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-Jl02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-Jl02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-Jl02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-Jl02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-Jl02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-Jl02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

							OCP		BTEX						Chlorinated Hydrocarbons																														Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
							Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL									0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5			0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil																																																			10										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									120	5300	18000			15000																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																														
0-1m									NL	NL	NL			NL																																																
1-2m									NL	NL	NL			NL																																																
2-4m									NL	NL	NL			NL																																																
Csat									360	64	560			300																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																														
0-1m					Human health				NL	NL	NL			NL																																																
1-2m									NL	NL	NL			NL																																																
2-4m									NL	NL	NL			NL																																																
Csat									440	69	640			330																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																														
0-1m									NL	NL	NL			NL																																																
1-2m									NL	NL	NL			NL																																																
2-4m									NL	NL	NL			NL																																																
Csat									430	68	630			330																																																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																																														
ANZECC 1992																																																															
US EPA ECO-SSL																																																														
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.													5																																												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									65		105																																																		
0-2m										125				45																																																
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																															
0-2m									50	70	85			105																																																
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																								
38 @ 0.50M	3/07/2017	M17-Jl02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-Jl02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-Jl02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-Jl02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-Jl02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-Jl02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-Jl02254	552701	1.50 M	FILL, silty SAND, Rubbish		0.425	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
40 @ 3.00M	3/07/2017	M17-Jl02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-Jl02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-Jl02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-Jl02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-Jl02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-Jl02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-Jl02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-Jl02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-Jl02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-Jl02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-Jl02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-Jl02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-Jl02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-Jl02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-Jl02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-Jl02220	552701	1.50 M	FILL, silty SAND		-	-	0.1	<0.1	<0.1	1.5	0.5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 3.00M	3/07/2017	M17-Jl02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-Jl02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-Jl02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-Jl02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-Jl02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-Jl02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-Jl02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-Jl02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-Jl02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-Jl02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8	<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
51 @ 3.00M	3/07/2017	M17-Jl02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-Jl02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-Jl02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-Jl02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-Jl02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-Jl02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-Jl02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-Jl02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-Jl02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-Jl02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-Jl02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-Jl02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-Jl02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 3.00M	3/07/2017	M17-Jl02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-Jl02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-Jl02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-Jl02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-Jl02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-Jl02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-Jl02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-Jl02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-Jl02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-Jl02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-Jl02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-Jl02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-Jl02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-Jl02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-Jl02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-Jl02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-Jl02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-Jl02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-Jl02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-Jl02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-Jl02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-Jl02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-Jl02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-Jl02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-Jl02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-Jl02199	552701	1.50 M	FILL, silty SAND		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.15M	3/07/2017	M17-Jl02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-Jl02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-Jl02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

							OCP		BTEX					
							Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL									0.1	0.1	0.1	0.2	0.1	0.3
NEPM 2013 Table 1A(1) HILs Rec C Soil														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									120	5300	18000			15000
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand														
0-1m									NL	NL	NL			NL
1-2m									NL	NL	NL			NL
2-4m									NL	NL	NL			NL
Csat									360	64	560			300
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt														
0-1m				Human health					NL	NL	NL			NL
1-2m									NL	NL	NL			NL
2-4m									NL	NL	NL			NL
Csat									440	69	640			330
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay														
0-1m									NL	NL	NL			NL
1-2m									NL	NL	NL			NL
2-4m									NL	NL	NL			NL
Csat									430	68	630			330
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space														
ANZECC 1992														
US EPA ECO-SSL														
CSQG Residential/Parkland Use				Maintenance of (highly modified) ecosystems.										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									65		105			
0-2m										125				45
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil														
0-2m									50	70	85			105
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds								
63 @ 1.50M	3/07/2017	M17-Jl02212	552701	1.50 M	FILL, silty SAND		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
63 @ 3.00M	3/07/2017	M17-Jl02214	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
64 @ 0.50M	3/07/2017	M17-Jl02303	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
64 @ 1.00M	3/07/2017	M17-Jl02304	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
64 @ 2.50M	3/07/2017	M17-Jl02305	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
65 @ 0.15M	3/07/2017	M17-Jl02285	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
65 @ 1.00M	3/07/2017	M17-Jl02286	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
65 @ 2.00M	3/07/2017	M17-Jl02287	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
65 @ 2.50M	3/07/2017	M17-Jl02288	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
65 @ 3.00M	3/07/2017	M17-Jl02289	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
66 @ 1.50M	3/07/2017	M17-Jl02370	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
67 @ 0.15M	3/07/2017	M17-Jl02268	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
67 @ 0.50M	3/07/2017	M17-Jl02269	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
68 @ 0.15M	3/07/2017	M17-Jl02193	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
68 @ 0.50M	3/07/2017	M17-Jl02194	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
68 @ 1.50M	3/07/2017	M17-Jl02195	552701	1.50 M	FILL, sandy CLAY		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
68 @ 2.00M	3/07/2017	M17-Jl02196	552701	2.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-
69 @ 0.50M	3/07/2017	M17-Jl02297	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
69 @ 1.00M	3/07/2017	M17-Jl02298	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
69 @ 2.00M	3/07/2017	M17-Jl02299	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
69 @ 2.50M	3/07/2017	M17-Jl02300	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
69 @ 3.00M	3/07/2017	M17-Jl02301	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
70 @ 0.15M	3/07/2017	M17-Jl02328	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
70 @ 0.50M	3/07/2017	M17-Jl02329	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
70 @ 1.50M	3/07/2017	M17-Jl02330	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
70 @ 3.00M	3/07/2017	M17-Jl02331	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
71 @ 2.50M	3/07/2017	M17-Jl02377	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
72 @ 0.15M	3/07/2017	M17-Jl02256	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
72 @ 0.50M	3/07/2017	M17-Jl02257	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
73 @ 0.50M	3/07/2017	M17-Jl02189	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
73 @ 1.00M	3/07/2017	M17-Jl02190	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
73 @ 1.50M	3/07/2017	M17-Jl02191	552701	1.50 M	FILL, sandy CLAY		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
73 @ 3.00M	3/07/2017	M17-Jl02192	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
74 @ 0.15M	3/07/2017	M17-Jl02206	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
74 @ 0.50M	3/07/2017	M17-Jl02207	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
74 @ 3.00M	3/07/2017	M17-Jl02208	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
75 @ 0.15M	3/07/2017	M17-Jl02291	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
75 @ 0.50M	3/07/2017	M17-Jl02292	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
75 @ 1.50M	3/07/2017	M17-Jl02293	552701	1.50 M	FILL, silty SAND, Rubbish		<0.7	<0.45	-	-	-	-	-	-
75 @ 2.00M	3/07/2017	M17-Jl02294	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
75 @ 2.50M	3/07/2017	M17-Jl02295	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
76 @ 2.50M	3/07/2017	M17-Jl02290	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
77 @ 3.00M	3/07/2017	M17-Jl02403	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
78 @ 0.15M	3/07/2017	M17-Jl02375	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
78 @ 0.50M	3/07/2017	M17-Jl02376	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
79 @ 1.00M	3/07/2017	M17-Jl02373	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
79 @ 3.00M	3/07/2017	M17-Jl02374	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
80 @ 0.15M	3/07/2017	M17-Jl02371	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
80 @ 0.50M	3/07/2017	M17-Jl02372	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
81 @ 0.15M	3/07/2017	M17-Jl02398	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
82 @ 0.15M	3/07/2017	M17-Jl02394	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
82 @ 0.50M	3/07/2017	M17-Jl02395	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
82 @ 2.00M	3/07/2017	M17-Jl02396	552701	2.00 M	FILL, silty SAND, Rubbish		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
82 @ 3.00M	3/07/2017	M17-Jl02397	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
83 @ 0.15M	3/07/2017	M17-Jl02391	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
83 @ 0.50M	3/07/2017	M17-Jl02392	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
83 @ 1.00M	3/07/2017	M17-Jl02393	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
84 @ 0.15M	3/07/2017	M17-Jl02399	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
84 @ 0.50M	3/07/2017	M17-Jl02400	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
85 @ 0.15M	3/07/2017	M17-Jl02401	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
85 @ 0.50M	3/07/2017	M17-Jl02402	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
DUPLICATE 1	3/07/2017	M17-Jl02205	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-
DUPLICATE 2	3/07/2017	M17-Jl02238	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
DUPLICATE 4	3/07/2017	M17-Jl02267	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
DUPLICATE 5	3/07/2017	M17-Jl02315	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
DUPLICATE 6	3/07/2017	M17-Jl02316	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
DUPLICATE 7	3/07/2017	M17-Jl02317	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
DUPLICATE 8	3/07/2017	M17-Jl02346	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-

	Chlorinated Hydrocarbons																													
Field ID	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5		
CSQG Residential/Parkland Use				5																										
63 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8	<7
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
Field ID	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil								10										
63 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

		OCP		BTEX					
		Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.1	0.1	0.2	0.1	0.3
NEPM 2013 Table 1A(1) HILs Rec C Soil									
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space				120	5300	18000			15000
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand									
0-1m				NL	NL	NL			NL
1-2m				NL	NL	NL			NL
2-4m				NL	NL	NL			NL
Csat				360	64	560			300
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt									
0-1m	Human health			NL	NL	NL			NL
1-2m				NL	NL	NL			NL
2-4m				NL	NL	NL			NL
Csat				440	69	640			330
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay									
0-1m				NL	NL	NL			NL
1-2m				NL	NL	NL			NL
2-4m				NL	NL	NL			NL
Csat				430	68	630			330
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space									
ANZECC 1992									
US EPA ECO-SSL									
CSQG Residential/Parkland Use	Maintenance of (highly modified) ecosystems.								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil				65		105			
0-2m					125				45
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil									
0-2m				50	70	85			105
SPLIT 8		-	-	-	-	-	-	-	-
Statistical Summary									
Number of Results		10	10	15	15	15	15	15	15
Minimum Concentration		0.425	0.3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Maximum Concentration		<1	<0.75	0.1	<0.1	<0.1	1.5	0.5	2
Average Concentration		0.48	0.36	0.053	0.05	0.05	0.19	0.08	0.27
Median Concentration		0.5	0.375	0.05	0.05	0.05	0.1	0.05	0.15
Standard Deviation		0.055	0.055	0.013	0	0	0.36	0.12	0.48
Geometric Standard Deviation		1.1	1.2	1.2			2	1.8	2
95% ProUCL	95% Chebyshev (Mean, Sd) UCL								
	95% Student's-t UCL								

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	

	Chlorinated Hydrocarbons																													
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5		
NEPM 2013 Table 1A(1) HILs Rec C Soil																														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																														
0-1m																														
1-2m																														
2-4m																														
Csat																														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																														
0-1m																														
1-2m																														
2-4m																														
Csat																														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																														
0-1m																														
1-2m																														
2-4m																														
Csat																														
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																														
ANZECC 1992																														
US EPA ECO-SSL																														
CSQG Residential/Parkland Use				5																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																														
0-2m																														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																														
0-2m																														
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Results	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8	<7
Average Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.14	0.25	0.25	0.25	0.25	0.25	3.8	3.4
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.1	0.25	0.25	0.25	0.25	0.25	3.7	3.35
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.069	0	0	0	0	0	0.14	0.069
Geometric Standard Deviation																							1.5						1	1
95% Chebyshev (Mean, Sd) UCL																														
95% Student's-t UCL																														

	Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil								10										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																		
0-1m																		
1-2m																		
2-4m																		
Csat																		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																		
0-1m																		
1-2m																		
2-4m																		
Csat																		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																		
0-1m																		
1-2m																		
2-4m																		
Csat																		
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																		
ANZECC 1992																		
US EPA ECO-SSL																		
CSQG Residential/Parkland Use																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																		
0-2m																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
0-2m																		
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Results	8	8	8	8	8	8	8	10	8	8	8	8	8	9	9	9	9	9
Minimum Concentration	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
Average Concentration	0.14	0.25	0.25	0.25	0.25	0.25	0.25	0.037	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25	0.25
Median Concentration	0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.025	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25	0.25
Standard Deviation	0.069	0	0	0	0	0	0	0.026	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation	1.5							1.7										
95% Chebyshev (Mean, Sd) UCL																		
95% Student's-t UCL																		

Note:

** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds	Pentachlorophenol	tetrachlorophenols	Herbicides: 2,4,5-Trichlorophenoxy Acetic Acid	Herbicides: Hedonal	Herbicides: Atrazine	Herbicides: Dinoseb	Herbicides: 2-Methyl-4-chlorophenoxyacetic acid	Herbicides: 2-Methyl-4-Chlorophenoxy Butanoic Acid	Herbicides: Mecoprop	Inorganics: Cyanide (Free)	Inorganics: Cyanide Total	Inorganics: Fluoride	Inorganics: Moisture Content (dried @ 103°C)	Inorganics: pH (aqueous extract)	Lead: Lead	MAH: 1,2,4-trimethylbenzene	MAH: 1,3,5-trimethylbenzene	MAH: Isopropylbenzene	MAH: Styrene	MAH: Monocylic aromatic hydrocarbons EPAVic
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil					Human health		120		800	1300	400		800	800	800	240					600					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space					Human health																					
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand					Human health																					
0-1m					Human health																					
1-2m					Human health																					
2-4m					Human health																					
Csat					Human health																					
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt					Human health																					
0-1m					Human health																					
1-2m					Human health																					
2-4m					Human health																					
Csat					Human health																					
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay					Human health																					
0-1m					Human health																					
1-2m					Human health																					
2-4m					Human health																					
Csat					Human health																					
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space					Maintenance of (highly modified) ecosystems.													450			1100					
ANZECC 1992					Maintenance of (highly modified) ecosystems.															<6 and >8						
US EPA ECO-SSL					Maintenance of (highly modified) ecosystems.																					
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil					Maintenance of (highly modified) ecosystems.																					
0-2m					Maintenance of (highly modified) ecosystems.																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil					Maintenance of (highly modified) ecosystems.																					
0-2m					Maintenance of (highly modified) ecosystems.																					
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	35	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<1	<1	-	-	-	<20	-	-	-	-	<5	260	13	8.2	90	<0.5	<0.5	<0.5	<0.5	<1.1
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	120	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	38	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	44	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	6.1	7.6	130	<0.5	<0.5	<0.5	<0.5	<1.1
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	50	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	12	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	2.9	7.3	160	<0.5	<0.5	<0.5	<0.5	<1.1
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	190	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	16	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	<1	<1	-	-	-	<20	-	-	-	-	<5	110	9.4	8.8	41	<0.5	<0.5	<0.5	<0.5	<1.1
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	13	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	55	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	35	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	12	7.7	98	<0.5	<0.5	<0.5	<0.5	<1.1
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	63	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	77	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	5.8	7.9	22	<0.5	<0.5	<0.5	<0.5	<1.1
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	18	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.5	-	93	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	22	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	47	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-JI02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	26	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-JI02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	11	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-JI02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	38	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-JI02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3	-	8.9	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-JI02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.7	-	13	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-JI02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	29	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-JI02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	12	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-JI02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	55	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-JI02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	120	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-JI02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	16	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-JI02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	85	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-JI02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	27	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-JI02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.4	-	7.2	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-JI02390	552701	1.50 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	-	-	2.2	-	-	-	-	-	-	<0.6
21 @ 0.15M	3/07/2017	M17-JI02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	41	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-JI02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	26	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-JI02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3	-	6	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-JI02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	40	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-JI02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	46	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-JI02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	66	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-JI02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	24	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-JI02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	500	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-JI02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	27	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-JI02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	**1000**	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-JI02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	60	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-JI02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6	-	12	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-JI02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	<5	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-JI02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.1	-	130	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-JI02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7	-	53	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-JI02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.2	-	78	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-JI02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	20	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-JI02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	15	-	27	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-JI02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	17	-	37	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-JI02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	43	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-JI02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	47	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-JI02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	23	-	120	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-JI02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	15	-	24	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-JI02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	35	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-JI02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	28	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-JI02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	31	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-JI02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.7	-	22	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-JI02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	40	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-JI02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	13	-	44	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-JI02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	74	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-JI02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	81	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-JI02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	37	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-JI02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	9.3	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-JI02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.8	-	34	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-JI02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	43	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-JI02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	27	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-JI02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	14	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-JI02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	15	-	-	-	-	-

Field ID	Metals: Arsenic	Metals: Beryllium	Metals: Boron	Metals: Cadmium	Metals: Chromium (hexavalent)	Metals: Chromium (III+VI)	Metals: Cobalt	Metals: Copper	Metals: Manganese	Metals: Mercury	Metals: Molybdenum	Metals: Nickel	Metals: Selenium	Metals: Silver	Metals: Tin	Metals: Zinc	Organic: TRH >C10-C16	Organic: TRH >C16-C34	Organic: TRH >C34-C40	OCP: 4,4-DDE	OCP: a-BHC	OCP: Aldrin	OCP: Aldrin + Dieldrin	OCP: b-BHC	OCP: chlordane	OCP: d-BHC	OCP: DDD	OCP: DDT	OCP: DDT+DDE+DDD	OCP: Dieldrin	OCP: Endosulfan I	OCP: Endosulfan II	OCP: Endosulfan sulphate
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	20000	90	300		300	17000	19000	80		1200	700			30000							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																	
0-1m																																	
1-2m																																	
2-4m																																	
Csat																																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																	
0-1m																																	
1-2m																																	
2-4m																																	
Csat																																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																	
0-1m																																	
1-2m																																	
2-4m																																	
Csat																																	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	100					410		220				270	10			730																	
ANZECC 1992															50																		
US EPA ECO-SSL					130						6.6																						
CSQG Residential/Parkland Use				10																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																		1300	5600														
0-2m																																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																	
0-2m																		300	2800														
1 AT 0.50M	4.3	-	-	<0.4	-	11	-	<5	-	<0.1	<5	5	<2	0.5	<10	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	17	-	-	<0.4	<1	34	-	11	-	<0.1	<5	13	<2	0.5	<10	99	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
1 AT 2.0M	16	-	-	<0.4	-	26	-	12	-	0.1	<5	13	<2	0.4	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	4.4	-	-	<0.4	-	8.2	-	9	-	<0.1	<5	14	<2	0.8	<10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	6.9	-	-	<0.4	-	13	-	6.2	-	<0.1	<5	7.4	<2	0.3	<10	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	4.5	-	-	<0.4	<1	15	-	11	-	0.1	<5	7.3	<2	<0.2	<10	280	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
10 AT 0.50M	2.7	-	-	<0.4	-	6.2	-	11	-	<0.1	<5	12	<2	<0.2	<10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	4.4	-	-	<0.4	-	6.7	-	10	-	<0.1	<5	29	<2	0.2	<10	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	3.1	-	-	0.5	<1	11	-	50	-	0.1	<5	5.8	<2	<0.2	<10	330	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
11 AT 1.0M	5.4	-	-	<0.4	-	27	-	17	-	<0.1	<5	11	<2	0.3	16	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	<2	-	-	<0.4	-	19	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	11	-	-	<0.4	<1	18	-	6.1	-	0.2	<5	10	<2	<0.2	<10	56	<50	180	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
2 AT 1.50M	13	-	-	<0.4	-	20	-	<5	-	<0.1	<5	11	<2	<0.2	<10	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	6.2	-	-	<0.4	-	12	-	23	-	0.8	<5	12	<2	0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	6.4	-	-	<0.4	-	14	-	9.6	-	<0.1	<5	9.5	<2	0.2	<10	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	3.7	-	-	<0.4	<1	8.5	-	32	-	<0.1	<5	9.6	<2	<0.2	12	82	<50	190	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
6 AT 1.0M	6.3	-	-	0.5	-	25	-	22	-	3.1	<5	21	<2	0.2	<10	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	2.1	-	-	<0.4	-	8.6	-	12	-	<0.1	<5	<5	<2	0.3	<10	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	3.3	-	-	<0.4	<1	12	-	<5	-	<0.1	<5	5.5	<2	<0.2	<10	25	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
8 AT 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	6.4	-	-	<0.4	-	22	-	8.4	-	<0.1	<5	21	<2	<0.2	<10	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	6.5	-	-	<0.4	-	21	-	5.6	-	<0.1	<5	10	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	8.4	-	-	<0.4	-	24	-	22	-	<0.1	<5	46	<2	0.3	<10	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	5	<2	<0.2	<10	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	<2	-	-	<0.4	-	8.3	-	19	-	<0.1	<5	11	<2	<0.2	<10	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	<2	-	-	<0.4	-	<5	-	13	-	0.2	<5	<5	<2	<0.2	<10	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	11	-	-	<0.4	-	25	-	15	-	<0.1	<5	24	<2	<0.2	<10	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	<2	-	-	<0.4	-	<5	-	360	-	<0.1	<5	<5	<2	<0.2	13	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	<2	-	-	<0.4	-	<5	-	5.5	-	<0.1	<5	<5	<2	<0.2	<10	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	15	-	-	<0.4	-	14	-	<5	-	<0.1	<5	9.3	<2	<0.2	<10	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 0.15M	9.3	-	-	<0.4	-	33	-	28	-	<0.1	<5	38	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3.2	-	-	<0.4	-	9	-	11	-	<0.1	<5	14	<2	<0.2	<10	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	<2	-	-	<0.4	-	<5	-	5.7	-	<0.1	<5	<5	<2	<0.2	<10	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	6.9	-	-	<0.4	-	8.9	-	12	-	1.2	<5	17	<2	<0.2	<10	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3.4	-	-	<0.4	-	5.6	-	9.6	-	0.2	<5	11	<2	<0.2	<10	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	16	-	-	<0.4	-	28	-	20	-	<0.1	<5	28	<2	<0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	<2	-	-	0.7	-	11	-	130	-	<0.1	<5	30	<2	<0.2	270	1300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	<2	-	-	<0.4	-	<5	-	6.2	-	<0.1	<5	<5	<2	<0.2	<10	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	4.1	-	-	<0.4	-	7.3	-	32	-	<0.1	<5	9.1	<2	<0.2	<10	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	<2	-	-	<0.4	-	5.6	-	15	-	<0.1	<5	<5	<2	<0.2	<10	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	<2	-	-	<0.4	-	<5	-	7	-	<0.1	<5	6.1	<2	<0.2	<10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	<2	-	-	<0.4	-	5.1	-	9.6	-	<0.1	<5	<5	<2	<0.2	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	<2	-	-	<0.4	-	<5	-	7.1	-	<0.1	<5	<5	<2	0.3	<10	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	2.8	-	-	<0.4	-	9.1	-	6.9	-	<0.1	<5	<5	<2	<0.2	<10	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	<2	-	-	<0.4	-	<5	-	5.2	-	<0.1	<5	<5	<2	<0.2	<10	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	2.8	-	-	<0.4	-	6.5	-	14	-	<0.1	<5	11	<2	<0.2	<10	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	<2	-	-	<0.4	-	<5	-	8.3	-	<0.1	<5	<5	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	<2	-	-	<0.4	-	<5	-	6.7	-	<0.1	<5	<5	<2	<0.2	<10	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	5.1	-	-	0.6	-	9.2	-	26	-	0.2	<5	9.7	<2	1	33	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	4.4	-	-	<0.4	-	15	-	<5	-	<0.1	<5	7.1	<2	<0.2	<10	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	17	-	-	<0.4	-	20	-	7.9	-	<0.1	<5	12	<2	<0.2	<10	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	5.9	-	-	<0.4	-	32	-	16	-	<0.1	<5	18	<2	<0.2	<10	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3.1	-	-	<0.4	-	6.1	-	5.8	-	0.1	<5	5.2	<2	<0.2	<10	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	6.5	-	-	<0.4	-	11	-	14	-	0.1	<5	21	<2	<0.2	25	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	4.3	-	-	<0.4	-	8.6	-	12	-	<0.1	<5	9.3	<2	<0.2	<10	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	9.6	-	-	<0.4	-	14	-	15	-	<0.1	<5	18	<2	<0.2	24	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	16	-	-	<0.4	-	21	-	26	-	<0.1	<5	27	2.6	<0.2	<10	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	2.8	-	-	<0.4	-	17	-	34	-	<0.1	<5	20	<2	<0.2	<10	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	<2	-	-	<0.4	-	5.2	-	6.5	-	<0.1	<5	6.2	<2	<0.2	<10	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	<2	-	-	<0.4	-	8.6	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3.1	-	-	<0.4	-	11	-	10	-	<0.1	<5	6.8	<2	<0.2	<10	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	<2	-	-	<0.4	-	<5	-	5.1	-	<0.1	<5	<5	<2	<0.2	<10	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3.5	-	-	<0.4	-	18	-	5.2	-	<0.1	<5	5.3	<2	<0.2	<10	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	4.1	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	<2	-	-	<0.4	-	<5	-	6.1	-	0.1	<5	<5	<2	0.2	<10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

									Herbicides							Inorganics					Lead	MAH					Metals																Organic			Organochlorine Pesticides													
							Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid	Hedonal	Atrazine	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Cyanide (Free)	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocyclic aromatic hydrocarbons EPAVic	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5		2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil					Human health		120		800	1300	400		800	800	800	240					600						300	90	20000	90	300		300	17000	19000	80		1200	700			30000							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																											3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space					Maintenance of (highly modified) ecosystems.													450			1100						100					410		220				270	10			730																	
ANZECC 1992																				<6 and >8																					50																		
US EPA ECO-SSL																															130						6.6																						
CSQG Residential/Parkland Use																														10																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																											
0-2m																																												1300	5600														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																											
0-2m																																												300	2800														
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																				
38 @ 0.50M	3/07/2017	M17-JI02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	18	-	-	-	-	-	7.7	-	-	<0.4	-	15	-	6.1	-	<0.1	<5	6.9	<2	<0.2	<10	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-JI02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.6	-	23	-	-	-	-	-	2.1	-	-	0.8	-	8.1	-	7.7	-	<0.1	<5	5.9	<2	<0.2	<10	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-JI02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	100	-	-	-	-	-	5	-	-	0.5	-	9.3	-	21	-	<0.1	<5	12	<2	<0.2	<10	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-JI02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	85	-	-	-	-	-	7.9	-	-	<0.4	-	26	-	17	-	<0.1	<5	18	<2	<0.2	14	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-JI02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	17	-	60	-	-	-	-	-	7.1	-	-	<0.4	-	19	-	55	-	0.1	<5	14	<2	<0.2	21	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-JI02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	110	-	-	-	-	-	3.5	-	-	<0.4	-	7.9	-	22	-	<0.1	<5	14	<2	<0.2	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-JI02254	552701	1.50 M	FILL, silty SAND, Rubbish		<1	-	<0.5	<0.5	<0.2	-	<0.5	<0.5	<0.5	<5	-	-	35	-	550	-	-	-	-	-	5.8	<2	<10	0.5	<1	14	<5	39	100	1	-	9.2	<2	-	-	610	-	-	-	<0.05	-	<0.05	<0.1	-	<0.1	-	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
40 @ 3.00M	3/07/2017	M17-JI02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	22	-	39	-	-	-	-	-	3.6	-	-	<0.4	-	7.6	-	9.1	-	<0.1	<5	5.7	<2	<0.2	51	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-JI02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.2	-	71	-	-	-	-	-	<2	-	-	<0.4	-	18	-	6.1	-	<0.1	<5	<5	<2	<0.2	<10	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-JI02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	27	-	-	-	-	-	6.1	-	-	<0.4	-	15	-	10	-	<0.1	<5	16	<2	<0.2	<10	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-JI02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	36	-	-	-	-	-	4.9	-	-	<0.4	-	18	-	10	-	<0.1	<5	22	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-JI02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.2	-	40	-	-	-	-	-	4.1	-	-	<0.4	-	9.7	-	13	-	<0.1	<5	9.2	<2	<0.2	<10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-JI02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	15	-	<5	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-JI02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	15	-	<5	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-JI02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	48	-	-	-	-	-	3.7	-	-	<0.4	-	5.9	-	20	-	<0.1	<5	5.7	<2	<0.2	<10	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-JI02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6	-	7.8	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-JI02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	7.1	-	-	-	-	-	2	-	-	<0.4	-	11	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-JI02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	16	-	51	-	-	-	-	-	5.7	-	-	<0.4	-	24	-	14	-	0.1	<5	10	<2	<0.2	24	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-JI02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	48	-	-	-	-	-	4.3	-	-	<0.4	-	9.3	-	19	-	<0.1	<5	9.3	<2	<0.2	<10	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-JI02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	14	-	-	-	-	-	2.8	-	-	<0.4	-	12	-	14	-	<0.1	<5	9.2	<2	<0.2	500	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-JI02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	39	-	-	-	-	-	4.7	-	-	<0.4	-	10	-	14	-	<0.1	<5	15	<2	<0.2	<10	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-JI02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	45	-	-	-	-	-	8.9	-	-	<0.4	-	15	-	14	-	<0.1	<5	14	<2	<0.2	<10	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-JI02220	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	78	-	-	-	-	2.2	4.6	-	-	0.5	-	30	-	20	-	1.6	-	17	-	-	-	120	98	840	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 3.00M	3/07/2017	M17-JI02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	20	-	49	-	-	-	-	-	10	-	-	1	-	35	-	72	-	<0.1	<5	17	<2	7.9	<10	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-JI02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	47	-	-	-	-	-	6.6	-	-	<0.4	-	12	-	11	-	<0.1	<5	10	<2	<0.2	<10	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-JI02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	93	-	-	-	-	-	3.8	-	-	<0.4	-	10	-	28	-	<0.1	<5	24	<2	<0.2	12	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-JI02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	83	-	-	-	-	-	6.8	-	-	1.1	-	16	-	39	-	<0.1	<5	11	2.3	<0.2	99	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-JI02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	30	-	7200	-	-	-	-	-	110	-	-	14	-	110	-	170,000	-	0.2	<100	300	<20	<50	790	120,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-JI02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	170	-	-	-	-	-	34	-	-	<0.4	-	52	-	37	-	<0.1	<5	13	<2	<0.2	<10	6100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-JI02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	210	-	-	-	-	-	27	-	-	<0.4	-	27	-	26	-	<0.1	<5	15	<2	<0.2	<10	960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-JI02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	110	-	-	-	-	-	13	-	-	<0.4	-	31	-	73	-	<0.1	<5	21	<2	<0.2	39	590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-JI02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	53	-	-	-	-	-	9.2	-	-	<0.4	-	30	-	8.8	-	<0.1	<5	14	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-JI02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	4.1	7.3	150	<0.5	<0.5	<0.5	<0.5	<1.1	6.9	-	-	<0.4	<1	14	-	9.2	-	<0.1	<5	12	<2	<0.2	<10	40	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
51 @ 3.00M	3/07/2017	M17-JI02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	4.2	-	35	-	-	-	-	-	12	-	-	<0.4	-	18	-	17	-	<0.1	<5	15	<2	<0.2	<10	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-JI02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	51	-	-	-	-	-	3.5	-	-	<0.4	-	9.9	-	9.5	-	<0.1	<5	5.6	<2	<0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-JI02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	23	-	-	-	-	-	2.3	-	-	<0.4	-	6.9	-	6.7	-	<0.1	<5	<5	<2	0.3	<10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-JI02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	14	-	34	-	-	-	-	-	33	-	-	<0.4	-	28	-	9	-	<0.1	<5	8.5	<2	<0.2	<10	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-JI02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	45	-	-	-	-	-	7.6	-	-	<0.4	-	13	-	11	-	<0.1	<5	11	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-JI02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	43	-	-	-	-	-	4.7	-	-	<0.4	-	11	-	9.9	-	<0.1	<5	11	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-JI02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	34	-	-	-	-	-	3.9	-	-	<0.4	-	6.6	-	11	-	<0.1	<5	7.8	<2	<0.2	<10	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-JI02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	97	-	-	-	-	-	4.7	-	-	<0.4	-	13	-	18	-	<0.1	<5	19	<2	<0.2	<10	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-JI02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	22	-	74	-	-	-	-	-	4.7	-	-	1.9	-	13	-	48	-	<0.1	<5	12	<2	23	11	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-JI02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	32	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	7.8	-	0.1	<5	<5	<2	<0.2	<10	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-JI02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	38	-	-	-	-	-	4.7	-	-	<0.4	-	14	-	11	-	<0.1	<5	20	<2	<0.2	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-JI02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	10	-	68	-	-	-	-	-	6.6	-	-	0.6	-	19	-	27	-	2.6	<5	15	<2	0.8	13	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-JI02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	22	-	360	-	-	-	-	<0.6	4.8	-	-	1.7	-	29	-	20	-	1	-	10	-	-	-	280	<50	970	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 3.00M	3/07/2017	M17-JI02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	120	-	-	-	-	-	4.9	-	-	0.7	-	13	-	21	-	0.3	<5	15	<2	<0.2	140	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-JI02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	52	-	-	-	-	-	6.5	-	-	<0.4	-	10	-	16	-	<0.1	<5	14	<2	<0.2	<10	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-JI02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	55	-	-	-	-	-	10	-	-	<0.4	-	28	-	30	-	0.2	<5	22	<2	<0.2	120	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-JI02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	40	-	-	-	-	-	5.8	-	-	<0.4	-	10	-	14	-	0.1	<5	12	<2	<0.2	29	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-JI02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	28	-	-	-	-	-	4.3	-	-	<0.4	-	16	-	9	-	<0.1	<5	5.9	<2	<0.2	<10	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-JI02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	22	-	-	-	-	-	2.3	-	-	<0.4	-	11	-	15	-	<0.1	<5	34	<2	<0.2	<10	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-JI02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	77	-	-	-	-	-	4.4	-	-	<0.4	-	8.7	-	11	-	0.1	<5	11	<2	<0.2	<10	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-JI02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	28	-	98	-	-	-	-	-	5.8	-	-	<0.4	-	22	-	26	-	0.3	<5	18	3.5	<0.2	150	420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-JI02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	44	-	-	-	-	-	2.3	-	-	<0.4	-	5.4	-	9.5	-	<0.1	<5	<5	<2	<0.2	<10	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-JI02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	160	-	-	-	-	-	22	-	-	<0.4	-	31	-	32	-	<0.1	<5	29	<2	<0.2	39	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-JI02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	150	-	-	-	-	-	23	-	-	<0.4	-	27	-	49	-	0.1	<5	25	<2	1.8	340	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-JI02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	400	-	-	-	-	-	6.2	-	-	<0.4	-	9.4	-	60	-	<0.1	<5	8.6	<2	<0.2	<10	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-JI02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7	-	39	-	-	-	-	-	6.2	-	-	<0.4	-	17	-	18	-	<0.1	<5	9.1	<2	<0.2	<10	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-JI02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	77	-	-	-	-	-	3.7	-	-	<0.4	-	8.3	-	20	-	<0.1	<5	5.9	<2	<0.2	<10	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-JI02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	53	-	-	-	-	-	8.4	-	-	0.8	-	20	-	23	-	<0.1	<5	18	<2	<0.2	<10	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-JI02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.9	-	63	-	-	-	-	-	110	-	-	<0.4	-	30	-	12	-	0.1	<5	22	<2	<0.2	<10	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-JI02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	4	-	42	-	-	-	-	-	4.5	-	-	<0.4	-	6.9	-	26	-	<0.1	<5	8.4	<2	<0.2	11	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-JI02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.5	-	40	-	-	-	-	-	9	-	-	<0.4	-	12	-	12	-	<0.1	<5	9.4	<2	<0.2	<10	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-JI02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.5	-	8.5	-	-	-	-	-	2.5	-	-	<0.4	-	9.8	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-JI02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	29	-	-	-	-	-	5.7	-	-	<0.4	-	8.8	-	9.5	-	<0.1	<5	8.1	<2	<0.2	<10	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-JI02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	13	-	38	-	-	-	-	-	4.9	-	-	<0.4	-	30	-	<5	-	<0.1	<5	11	<2	<0.2	<10	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-JI02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	70	-	-	-	-	-	7.4	-	-	<0.4	-	11	-	17	-	<0.1	<5	10	<2	0.2	<10	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-JI02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	33	-	-	-	-	-	5	-	-	0.7	-	11	-	24	-	4.2	<5	16	<2	<0.2	<10	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-JI02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	57	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-JI02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	29	-	-	-	-	-	3.9	-	-	<0.4	-	10	-	12	-	<0.1	<5	19	<2	<0.2	<10	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-JI02199	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	14	-	57	-	-	-	-	<0.6	12	-	-	<0.4	-	22	-	12	-	0.2	-	13	-	-	-	46	<50	370	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.15M	3/07/2017	M17-JI02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	47	-	-	-	-	-	5.5	-	-	<0.4	-	8.4	-	9.3	-	<0.1	<5	8	<2	<0.2	<10	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-JI02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8	-	130	-	-	-	-	-	6.5	-	-	<0.4	-	16	-	72	-	0.1	<5	23	<2	<0.2	<10	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-JI02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	140	-	-	-	-	-	5.2	-	-	<0.4	-	13	-	29	-	0.1	<5	12	<2	<0.2	17	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

									Herbicides							Inorganics					Lead	MAH					Metals																Organic			Organochlorine Pesticides													
							Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid	Hedonal	Atrazine	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Cyanide (Free)	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocyclic aromatic hydrocarbons EPAVic	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5		2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil							120		800	1300	400		800	800	800	240					600						300	90	20000	90	300		300	17000	19000	80		1200	700			30000							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																											3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																											
0-1m					Human health																																																							
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																		450			1100						100					410		220				270	10			730																	
ANZECC 1992																				<6 and >8																					50																		
US EPA ECO-SSL																															130						6.6																						
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.																									10																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																												1300	5600														
0-2m																																																											
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																											
0-2m																																												300	2800														
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																					
63 @ 1.50M	3/07/2017	M17-Jl02212	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.5	-	53	-	-	-	-	<0.6	4	-	-	<0.4	-	7.6	-	13	-	<0.1	-	10	-	-	-	64	<50	360	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	3/07/2017	M17-Jl02214	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	7.4	-	65	-	-	-	-	-	7.5	-	-	<0.4	-	21	-	21	-	0.4	<5	14	<2	<0.2	<10	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	3/07/2017	M17-Jl02303	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	29	-	-	-	-	-	2.7	-	-	<0.4	-	6.4	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	3/07/2017	M17-Jl02304	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7	-	34	-	-	-	-	-	3.2	-	-	<0.4	-	6.9	-	9.2	-	0.1	<5	6	<2	<0.2	<10	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	3/07/2017	M17-Jl02305	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	15	-	45	-	-	-	-	-	2.8	-	-	<0.4	-	18	-	15	-	0.4	<5	7.1	<2	<0.2	16	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	3/07/2017	M17-Jl02285	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.8	-	73	-	-	-	-	-	4.5	-	-	<0.4	-	9.5	-	47	-	<0.1	<5	7.4	<2	<0.2	<10	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	3/07/2017	M17-Jl02286	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	10	-	32	-	-	-	-	-	3.9	-	-	<0.4	-	6.3	-	14	-	<0.1	<5	17	<2	<0.2	73	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	3/07/2017	M17-Jl02287	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	24	-	100	-	-	-	-	-	3.9	-	-	<0.4	-	8.3	-	38	-	6.6	<5	<5	<2	<0.2	<10	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	3/07/2017	M17-Jl02288	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	17	-	48	-	-	-	-	-	5.8	-	-	<0.4	-	14	-	30	-	0.2	<5	17	<2	<0.2	25	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	3/07/2017	M17-Jl02289	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	20	-	57	-	-	-	-	-	5	-	-	<0.4	-	12	-	32	-	1.9	<5	9.2	2.2	0.2	35	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	3/07/2017	M17-Jl02370	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	13	-	36	-	-	-	-	-	19	-	-	<0.4	-	27	-	7	-	<0.1	<5	9.2	<2	<0.2	<10	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	3/07/2017	M17-Jl02268	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.1	-	8.2	-	-	-	-	-	3.3	-	-	<0.4	-	11	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	3/07/2017	M17-Jl02269	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	5.5	-	-	-	-	-	3.9	-	-	<0.4	-	13	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	3/07/2017	M17-Jl02193	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.1	-	11	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	3/07/2017	M17-Jl02194	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	18	-	-	-	-	-	4.7	-	-	<0.4	-	17	-	10	-	<0.1	<5	23	<2	<0.2	<10	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	3/07/2017	M17-Jl02195	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	35	-	-	-	-	<0.6	5.1	-	-	<0.4	-	9.2	-	28	-	0.1	-	6.9	-	-	-	62	<50	120	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	3/07/2017	M17-Jl02196	552701	2.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	9.8	-	36	-	-	-	-	-	5.2	-	-	<0.4	-	9.6	-	26	-	0.1	<5	11	<2	<0.2	<10	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	3/07/2017	M17-Jl02297	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	9.9	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	3/07/2017	M17-Jl02298	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	49	-	-	-	-	-	5.9	-	-	<0.4	-	19	-	15	-	<0.1	<5	13	<2	<0.2	<10	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	3/07/2017	M17-Jl02299	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	6.3	-	46	-	-	-	-	-	7	-	-	<0.4	-	14	-	15	-	0.1	<5	14	<2	<0.2	14	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	3/07/2017	M17-Jl02300	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	10	-	43	-	-	-	-	-	12	-	-	<0.4	-	15	-	11	-	<0.1	<5	13	<2	<0.2	34	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	3/07/2017	M17-Jl02301	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	10	-	41	-	-	-	-	-	7.4	-	-	<0.4	-	16	-	15	-	<0.1	<5	14	2.1	<0.2	44	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	3/07/2017	M17-Jl02328	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.2	-	47	-	-	-	-	-	20	-	-	<0.4	-	24	-	11	-	0.2	<5	13	<2	<0.2	<10	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	3/07/2017	M17-Jl02329	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	49	-	-	-	-	-	20	-	-	<0.4	-	41	-	13	-	<0.1	<5	16	<2	<0.2	<10	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	3/07/2017	M17-Jl02330	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	34	-	-	-	-	-	16	-	-	<0.4	-	11	-	6.3	-	<0.1	<5	6.2	<2	<0.2	16	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	3/07/2017	M17-Jl02331	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	76	-	-	-	-	-	13	-	-	0.5	-	15	-	55	-	<0.1	<5	9.5	<2	<0.2	<10	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	3/07/2017	M17-Jl02377	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	28	-	-	-	-	-	6.8	-	-	<0.4	-	12	-	26	-	1.5	<5	27	<2	<0.2	<10	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	3/07/2017	M17-Jl02256	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	66	-	-	-	-	-	5.9	-	-	0.5	-	17	-	26	-	<0.1	<5	28	<2	<0.2	<10	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	3/07/2017	M17-Jl02257	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.3	-	52	-	-	-	-	-	4.1	-	-	<0.4	-	12	-	16	-	<0.1	<5	25	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	3/07/2017	M17-Jl02189	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	42	-	-	-	-	-	11	-	-	<0.4	-	24	-	23	-	<0.1	<5	20	<2	<0.2	<10	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	3/07/2017	M17-Jl02190	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	15	-	32	-	-	-	-	-	9.7	-	-	<0.4	-	28	-	11	-	0.1	<5	14	<2	<0.2	<10	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	3/07/2017	M17-Jl02191	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	16	-	34	-	-	-	-	<0.6	14	-	-	<0.4	-	34	-	12	-	<0.1	-	13	-	-	-	59	<50	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	3/07/2017	M17-Jl02192	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	20	-	-	-	-	-	3.9	-	-	<0.4	-	24	-	19	-	<0.1	<5	32	<2	<0.2	<10	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	3/07/2017	M17-Jl02206	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	34	-	-	-	-	-	4.7	-	-	<0.4	-	11	-	17	-	5.3	<5	13	<2	<0.2	<10	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	3/07/2017	M17-Jl02207	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	9.8	-	16	-	-	-	-	-	4.2	-	-	<0.4	-	15	-	6.8	-	0.2	<5	8.4	<2	<0.2	<10	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	3/07/2017	M17-Jl02208	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	41	-	-	-	-	-	10	-	-	<0.4	-	16	-	15	-	0.2	<5	11	<2	<0.2	<10	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	3/07/2017	M17-Jl02291	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	39	-	-	-	-	-	5.8	-	-	<0.4	-	12	-	8.1	-	0.5	<5	6.7	<2	<0.2	<10	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	3/07/2017	M17-Jl02292	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	15	-	40	-	-	-	-	-	15	-	-	<0.4	-	31	-	5.2	-	<0.1	<5	13	<2	<0.2	<10	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	3/07/2017	M17-Jl02293	552701	1.50 M	FILL, silty SAND, Rubbish		<1	-	<0.5	<0.5	<0.2	-	<0.5	<0.5	<0.5	<5	-	-	7.8	-	47	-	-	-	-	-	12	<2	<10	<0.4	<1	14	<5	11	42	0.1	-	8.1	<2	-	-	51	-	-	-	<0.05	-	<0.05	<0.1	-	<0.1	-	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
75 @ 2.00M	3/07/2017	M17-Jl02294	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	14	-	160	-	-	-	-	-	7.8	-	-	<0.4	-	11	-	11	-	<0.1	<5	6.8	<2	<0.2	16	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	3/07/2017	M17-Jl02295	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	28	-	-	-	-	-	2.5	-	-	<0.4	-	<5	-	14	-	<0.1	<5	<5	<2	<0.2	13	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	3/07/2017	M17-Jl02290	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	52	-	-	-	-	-	15	-	-	<0.4	-	16	-	14	-	<0.1	<5	16	<2	<0.2	<10	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	3/07/2017	M17-Jl02403	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	380	-	-	-	-	-	7.9	-	-	2.8	-	34	-	100	-	0.2	<5	17	<2	<0.2	28	1900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	3/07/2017	M17-Jl02375	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.3	-	39	-	-	-	-	-	6.4	-	-	<0.4	-	10	-	47	-	5.7	<5	5.8	<2	<0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	3/07/2017	M17-Jl02376	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	19	-	-	-	-	-	7.9	-	-	<0.4	-	27	-	15	-	1.6	<5	9.2	<2	<0.2	<10	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	3/07/2017	M17-Jl02373	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.6	-	56	-	-	-	-	-	8.1	-	-	<0.4	-	16	-	11	-	<0.1	<5	14	<2	<0.2	<10	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	3/07/2017	M17-Jl02374	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	5.4	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	3/07/2017	M17-Jl02371	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4	-	85	-	-	-	-	-	2.5	-	-	<0.4	-	<5	-	10	-	<0.1	<5	5.2	<2	<0.2	<10	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	3/07/2017	M17-Jl02372	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	44	-	-	-	-	-	4.3	-	-	<0.4	-	9.2	-	24	-	<0.1	<5	6	<2	<0.2	<10	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	3/07/2017	M17-Jl02398	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.4	-	33	-	-	-	-	-	3.9	-	-	<0.4	-	7.2	-	9.8	-	<0.1	<5	<5	<2	<0.2	<10	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	3/07/2017	M17-Jl02394	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	92	-	-	-	-	-	4.3	-	-	<0.4	-	10	-	17	-	<0.1	<5	7.1	<2	<0.2	<10	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	3/07/2017	M17-Jl02395	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.3	-	84	-	-	-	-	-	3.6	-	-	<0.4	-	9.7	-	16	-	<0.1	<5	11	<2	<0.2	<10	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	3/07/2017	M17-Jl02396	552701	2.00 M	FILL, silty SAND, Rubbish		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	5.7	8.2	35	<0.5	<0.5	<0.5	<0.5	<1.1	8.7	-	-	<0.4	<1	12	-	8.6	-	<0.1	<5	9.9	<2	<0.2	<10	51	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
82 @ 3.00M	3/07/2017	M17-Jl02397	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	74	-	-	-	-	-	6	-	-	0.4	-	9.4	-	22	-	<0.1	<5	12	<2	<0.2	13	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	3/07/2017	M17-Jl02391	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.3	-	41	-	-	-	-	-	2.9	-	-	<0.4	-	7.1	-	14	-	<0.1	<5	8.2	<2	<0.2	<10	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	3/07/2017	M17-Jl02392	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.6	-	43	-	-	-	-	-	2.5	-	-	<0.4	-	5.7	-	11	-	<0.1	<5	6.7	<2	<0.2	<10	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	3/07/2017	M17-Jl02393	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	65	-	-	-	-	-	<2	-	-	<0.4	-	20	-	37	-	<0.1	<5	26	<2	<0.2	<10	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	3/07/2017	M17-Jl02399	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	14	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	3/07/2017	M17-Jl02400	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	22	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	8.3	-	<0.1	<5	<5	<2	<0.2	<10	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	3/07/2017	M17-Jl02401	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	43	-	-	-	-	-	5.8	-	-	<0.4	-	22	-	23	-	<0.1	<5	19	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	3/07/2017	M17-Jl02402	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	25	-	-	-	-	-	2.4	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	3/07/2017	M17-Jl02205	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	72	-	-	-	-	-	6.4	-	-	<0.4	-	14	-	30	-	1.3	<5	11	<2	0.3	36	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	3/07/2017	M17-Jl02238	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	8	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	6.3	-	3.3	<5	<5	<2	<0.2	<10	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	3/07/2017	M17-Jl02267	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.3	-	13	-	-	-	-	-	2.8	-	-	<0.4	-	13	-	8.4	-	<0.1	<5	7.8	<2	<0.2	<10	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	3/07/2017	M17-Jl02315	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	43	-	-	-	-	-	4.9	-	-	<0.4	-	8.5	-	32	-	<0.1	<5	11	<2	<0.2	<10	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	3/07/2017	M17-Jl02316	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	99	-	-	-	-	-	13	-	-	2	-	28	-	97	-	0.6	<5	23	<2	4.1	320	390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	3/07/2017	M17-Jl02317	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	93	-	-	-	-	-	7.6	-	-	<0.4	-	23	-	15	-	<0.1	<5	13	<2	<0.2	<10	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	3/07/2017	M17-Jl02346	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	50	-	-	-	-	-	5	-	-	<0.4	-	14	-	21	-	<0.1	<5	7.7	<2	<0.2	<10	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	16.6	-	58	-	-	-	-	-	6	-	-	<1	-	10	-	58	-	0.6	4	8	<5	<2	40	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	11	-	-	-	-	-	<5	-	-	<1	-	5	-	7	-	5	<2	2	<5	<2	<5	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	29.1	-	90	-	-	-	-	-	5	-	-	3	-	17	-	53	-	0.2	2	17	<5	111	<5	391	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	18	-	-	-	-	-	<5	-	-	<1	-	14	-	8	-	<0.1	<2	13	<5	<2	<5	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	10.8	-	24	-	-	-	-	-	<5	-	-	<1	-	6	-	8	-	<0.1	<2	5	<5	<2	<5	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	9	-	65	-	-	-	-	-	8	-	-	1	-	21	-	59	-	0.5	<2	16	<5	4	213	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	57	-	-	-	-	-	<5	-	-	<1	-	15	-	10	-	<0.1	<2	8	<5	<2	<5	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

				Herbicides							Inorganics					Lead	MAH				
		Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid	Hedonal	Atrazine	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Cyanide (Free)	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health	**120**		**800**	**1300**	**400**		**800**	**800**	**800**	**240**					**600**					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	Human health																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand	Human health																				
0-1m	Human health																				
1-2m	Human health																				
2-4m	Human health																				
Csat	Human health																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt	Human health																				
0-1m	Human health																				
1-2m	Human health																				
2-4m	Human health																				
Csat	Human health																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay	Human health																				
0-1m	Human health																				
1-2m	Human health																				
2-4m	Human health																				
Csat	Human health																				
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.												450			1100					
ANZECC 1992	Maintenance of (highly modified) ecosystems.														<6 and >8						
US EPA ECO-SSL	Maintenance of (highly modified) ecosystems.																				
CSQG Residential/Parkland Use	Maintenance of (highly modified) ecosystems.																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil	Maintenance of (highly modified) ecosystems.																				
0-2m	Maintenance of (highly modified) ecosystems.																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	Maintenance of (highly modified) ecosystems.																				
0-2m	Maintenance of (highly modified) ecosystems.																				
SPLIT 8		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	41	-	-	-	-	-
Statistical Summary																					
Number of Results		11	9	2	2	2	9	2	2	2	2	8	8	226	8	225	8	8	8	8	15
Minimum Concentration		<1	<1	<0.5	<0.5	<0.2	<20	<0.5	<0.5	<0.5	<5	<5	<100	1.2	7.3	<5	<0.5	<0.5	<0.5	<0.5	<0.6
Maximum Concentration		<1	<1	<0.5	<0.5	<0.2	<20	<0.5	<0.5	<0.5	<5	<5	260	35	8.8	7200	<0.5	<0.5	<0.5	<0.5	2.2
Average Concentration		0.5	0.5				10					2.5	84	9.1	7.9	95	0.25	0.25	0.25	0.25	0.56
Median Concentration		0.5	0.5	0.25	0.25	0.1	10	0.25	0.25	0.25	2.5	2.5	50	8.4	7.8	43	0.25	0.25	0.25	0.25	0.55
Standard Deviation		0	0				0					0	74	5.2	0.51	485	0	0	0	0	0.47
Geometric Standard Deviation													1.8	1.8	1.1	2.6					1.7
95% Chebyshev (Mean, Sd) UCL	95% ProUCL															236.2					
95% Student's-t UCL	95% ProUCL																				

	Metals																Organic		
	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG
EQL	2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5	50	100	100
NEPM 2013 Table 1A(1) HILs Rec C Soil	**300**	**90**	**20000**	**90**	**300**		**300**	**17000**	**19000**	**80**		**1200**	**700**			**30000**			
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	**3800**	**5300**	**7400**
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																			
0-1m																			
1-2m																			
2-4m																			
Csat																			
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																			
0-1m																			
1-2m																			
2-4m																			
Csat																			
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																			
0-1m																			
1-2m																			
2-4m																			
Csat																			
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	100					410		220				270	10			730			
ANZECC 1992															50				
US EPA ECO-SSL					130						6.6								
CSQG Residential/Parkland Use				10															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																		1300	5600
0-2m																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																			
0-2m																		300	2800
SPLIT 8	<5	-	-	<1	-	9	-	20	-	0.1	<2	5	<5	<2	<5	56	-	-	-
Statistical Summary																			
Number of Results	225	2	2	225	10	225	2	225	2	225	217	225	219	217	217	225	15	15	15
Minimum Concentration	<2	<2	<10	<0.4	<1	<5	<5	<5	42	<0.1	<2	2	<2	<0.2	<5	<5	<50	<100	<100
Maximum Concentration	110	<2	<10	14	<1	110	<5	170000	100	6.6	<100	300	<20	111	790	120000	98	970	240
Average Concentration	6.8			0.35	0.5	14		774		0.29	2.7	12	1.1	0.96	21	668	30	229	66
Median Concentration	4.7	1	5	0.2	0.5	11	2.5	12	71	0.05	2.5	9.6	1	0.1	5	64	25	50	50
Standard Deviation	11			0.98	0	11		11332		0.88	3.2	21	0.71	7.9	75	8003	19	297	50
Geometric Standard Deviation	2.5			1.7		2.2		3.1	1.8	3	1.3	2.3	1.3	2.7	2.6	3	1.4	3	1.5
95% ProUCL 95% Chebyshev (Mean, Sd) UCL	10.22							4068				18.68			47.1	2994		570.5	
95% ProUCL 95% Student's-t UCL				0.644															

	Organochlorine Pesticides													
	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil				**10**		**70**				**400**				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand														
0-1m														
1-2m														
2-4m														
Csat														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt														
0-1m														
1-2m														
2-4m														
Csat														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay														
0-1m														
1-2m														
2-4m														
Csat														
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space														
ANZECC 1992														
US EPA ECO-SSL														
CSQG Residential/Parkland Use														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil														
0-2m														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil														
0-2m														
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary														
Number of Results	10	8	10	10	8	10	8	10	10	10	10	10	10	10
Minimum Concentration	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
Maximum Concentration	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
Average Concentration	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.075	0.025	0.025	0.025	0.025
Median Concentration	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.075	0.025	0.025	0.025	0.025
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation														
95% ProUCL 95% Chebyshev (Mean, Sd) UCL														
95% ProUCL 95% Student's-t UCL														

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental															Organophosphorous Pesticides	PAH			PAH/Phenols																												Pesticides	Phenolics			Polychlorinated Biphenyls						
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2.4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo(b+j)fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil							20				10		400	30	250			3																								300		40000	5700		20										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																									1900																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									9																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																									
0-1m				Human health																																					NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																									170																
ANZECC 1992																																																									
US EPA ECO-SSL																																										18															
CSQG Residential/Parkland Use				Maintenance of (highly modified) ecosystems.																																								3.8													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																									
0-2m																														0.7																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																									
0-2m																														0.7																										
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	0.6	0.9	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	0.5	<0.5	1.181	0.6	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	-	0.7	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-Jl02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-Jl02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-Jl02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-Jl02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-Jl02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-Jl02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-Jl02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-Jl02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-Jl02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-Jl02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-Jl02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-Jl02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-Jl02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-Jl02390	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	-	-	-	-	-	-	-
21 @ 0.15M	3/07/2017	M17-Jl02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-Jl02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-Jl02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-Jl02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-Jl02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-Jl02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-Jl02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-Jl02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-Jl02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-Jl02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-Jl02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-Jl02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-Jl02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-Jl02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-Jl02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-Jl02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-Jl02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-Jl02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-Jl02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-Jl02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-Jl02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-Jl02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-Jl02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-Jl02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-Jl02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-Jl02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-Jl02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-Jl02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-Jl02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-Jl02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-Jl02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-Jl02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-Jl02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-Jl02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-Jl02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-Jl02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-Jl02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-Jl02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

															Organophosphorous Pesticides	PAH			PAH/Phenols																												Pesticides	Phenolics			Polychlorinated Biphenyls						
							Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo[b+j]fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil							20				10		400	30	250			3																								300		40000	5700		20										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																									1900																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									9																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																									
0-1m					Human health																																				NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																									170																
ANZECC 1992																																																									
US EPA ECO-SSL																																										18															
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.																																							3.8													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																									
0-2m																															0.7																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																									
0-2m																															0.7																										
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																			
38 @ 0.50M	3/07/2017	M17-JI02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-JI02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-JI02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-JI02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-JI02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-JI02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-JI02254	552701	1.50 M	FILL, silty SAND, Rubbish		<0.05	-	-	-	<0.05	-	<0.05	<1	<0.2	<0.5	0.6	1.2	-	-	<0.2	-	<0.4	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	1.126	0.5	<0.5	<0.5	0.6	3.2	0.8	<0.5	<2.5	0.7	<0.05	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
40 @ 3.00M	3/07/2017	M17-JI02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-JI02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-JI02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-JI02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-JI02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-JI02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-JI02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-JI02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-JI02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-JI02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-JI02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-JI02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-JI02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-JI02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-JI02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-JI02220	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	1.2	1.4	1.7	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.7	0.9	0.7	0.6	0.7	0.7	<0.5	2.614	1.3	<0.5	0.5	<2 - 1.1	8	0.7	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-
47 @ 3.00M	3/07/2017	M17-JI02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-JI02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-JI02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-JI02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-JI02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-JI02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-JI02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-JI02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-JI02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-JI02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	0.6	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	-	0.7	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
51 @ 3.00M	3/07/2017	M17-JI02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-JI02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-JI02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-JI02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-JI02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-JI02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-JI02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-JI02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-JI02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-JI02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-JI02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-JI02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-JI02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5 - 0.6	0.6	<0.5	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
54 @ 3.00M	3/07/2017	M17-JI02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-JI02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-JI02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-JI02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-JI02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-JI02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-JI02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-JI02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-JI02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-JI02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-JI02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-JI02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-JI02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-JI02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-JI02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-JI02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-JI02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-JI02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-JI02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-JI02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-JI02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-JI02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-JI02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-JI02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-JI02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-JI02199	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.15M	3/07/2017	M17-JI02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-JI02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-JI02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

Guideline	Category
EQL	
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand	
0-1m	
1-2m	
2-4m	
Csat	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt	
0-1m	
1-2m	
2-4m	
Csat	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay	
0-1m	
1-2m	
2-4m	
Csat	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.
ANZECC 1992	
US EPA ECO-SSL	
CSQG Residential/Parkland Use	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil	
0-2m	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	
0-2m	

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
63 @ 1.50M	3/07/2017	M17-Jl02212	552701	1.50 M	FILL, silty SAND	
63 @ 3.00M	3/07/2017	M17-Jl02214	552701	3.00 M	FILL, silty SAND, Rubbish	
64 @ 0.50M	3/07/2017	M17-Jl02303	552701	0.50 M	FILL, silty SAND	
64 @ 1.00M	3/07/2017	M17-Jl02304	552701	1.00 M	FILL, silty SAND	
64 @ 2.50M	3/07/2017	M17-Jl02305	552701	2.50 M	FILL, silty SAND, Rubbish	
65 @ 0.15M	3/07/2017	M17-Jl02285	552701	0.15 M	FILL, silty SAND	
65 @ 1.00M	3/07/2017	M17-Jl02286	552701	1.00 M	FILL, silty SAND, Rubbish	
65 @ 2.00M	3/07/2017	M17-Jl02287	552701	2.00 M	FILL, silty SAND, Rubbish	
65 @ 2.50M	3/07/2017	M17-Jl02288	552701	2.50 M	FILL, silty SAND, Rubbish	
65 @ 3.00M	3/07/2017	M17-Jl02289	552701	3.00 M	FILL, silty SAND, Rubbish	
66 @ 1.50M	3/07/2017	M17-Jl02370	552701	1.50 M	FILL, silty SAND	
67 @ 0.15M	3/07/2017	M17-Jl02268	552701	0.15 M	FILL, silty SAND	
67 @ 0.50M	3/07/2017	M17-Jl02269	552701	0.50 M	FILL, silty SAND	
68 @ 0.15M	3/07/2017	M17-Jl02193	552701	0.15 M	FILL, silty SAND	
68 @ 0.50M	3/07/2017	M17-Jl02194	552701	0.50 M	FILL, sandy CLAY	
68 @ 1.50M	3/07/2017	M17-Jl02195	552701	1.50 M	FILL, sandy CLAY	
68 @ 2.00M	3/07/2017	M17-Jl02196	552701	2.00 M	FILL, sandy CLAY, Rubbish	
69 @ 0.50M	3/07/2017	M17-Jl02297	552701	0.50 M	FILL, silty SAND	
69 @ 1.00M	3/07/2017	M17-Jl02298	552701	1.00 M	FILL, silty SAND	
69 @ 2.00M	3/07/2017	M17-Jl02299	552701	2.00 M	FILL, silty SAND, Rubbish	
69 @ 2.50M	3/07/2017	M17-Jl02300	552701	2.50 M	FILL, silty SAND, Rubbish	
69 @ 3.00M	3/07/2017	M17-Jl02301	552701	3.00 M	FILL, silty SAND, Rubbish	
70 @ 0.15M	3/07/2017	M17-Jl02328	552701	0.15 M	FILL, silty SAND	
70 @ 0.50M	3/07/2017	M17-Jl02329	552701	0.50 M	FILL, silty SAND	
70 @ 1.50M	3/07/2017	M17-Jl02330	552701	1.50 M	FILL, silty SAND	
70 @ 3.00M	3/07/2017	M17-Jl02331	552701	3.00 M	FILL, silty SAND, Rubbish	
71 @ 2.50M	3/07/2017	M17-Jl02377	552701	2.50 M	FILL, silty SAND	
72 @ 0.15M	3/07/2017	M17-Jl02256	552701	0.15 M	FILL, silty SAND	
72 @ 0.50M	3/07/2017	M17-Jl02257	552701	0.50 M	FILL, silty SAND	
73 @ 0.50M	3/07/2017	M17-Jl02189	552701	0.50 M	FILL, sandy CLAY	
73 @ 1.00M	3/07/2017	M17-Jl02190	552701	1.00 M	FILL, sandy CLAY	
73 @ 1.50M	3/07/2017	M17-Jl02191	552701	1.50 M	FILL, sandy CLAY	
73 @ 3.00M	3/07/2017	M17-Jl02192	552701	3.00 M	FILL, sandy CLAY	
74 @ 0.15M	3/07/2017	M17-Jl02206	552701	0.15 M	FILL, silty SAND	
74 @ 0.50M	3/07/2017	M17-Jl02207	552701	0.50 M	FILL, sandy CLAY	
74 @ 3.00M	3/07/2017	M17-Jl02208	552701	3.00 M	FILL, sandy CLAY	
75 @ 0.15M	3/07/2017	M17-Jl02291	552701	0.15 M	FILL, silty SAND	
75 @ 0.50M	3/07/2017	M17-Jl02292	552701	0.50 M	FILL, sandy CLAY	
75 @ 1.50M	3/07/2017	M17-Jl02293	552701	1.50 M	FILL, silty SAND, Rubbish	
75 @ 2.00M	3/07/2017	M17-Jl02294	552701	2.00 M	FILL, silty SAND, Rubbish	
75 @ 2.50M	3/07/2017	M17-Jl02295	552701	2.50 M	FILL, silty SAND, Rubbish	
76 @ 2.50M	3/07/2017	M17-Jl02290	552701	2.50 M	FILL, silty SAND	
77 @ 3.00M	3/07/2017	M17-Jl02403	552701	3.00 M	FILL, silty SAND, Rubbish	
78 @ 0.15M	3/07/2017	M17-Jl02375	552701	0.15 M	FILL, silty SAND	
78 @ 0.50M	3/07/2017	M17-Jl02376	552701	0.50 M	FILL, silty SAND	
79 @ 1.00M	3/07/2017	M17-Jl02373	552701	1.00 M	FILL, silty SAND	
79 @ 3.00M	3/07/2017	M17-Jl02374	552701	3.00 M	FILL, silty SAND, Rubbish	
80 @ 0.15M	3/07/2017	M17-Jl02371	552701	0.15 M	FILL, silty SAND	
80 @ 0.50M	3/07/2017	M17-Jl02372	552701	0.50 M	FILL, silty SAND	
81 @ 0.15M	3/07/2017	M17-Jl02398	552701	0.15 M	FILL, silty SAND	
82 @ 0.15M	3/07/2017	M17-Jl02394	552701	0.15 M	FILL, silty SAND	
82 @ 0.50M	3/07/2017	M17-Jl02395	552701	0.50 M	FILL, silty SAND	
82 @ 2.00M	3/07/2017	M17-Jl02396	552701	2.00 M	FILL, silty SAND, Rubbish	
82 @ 3.00M	3/07/2017	M17-Jl02397	552701	3.00 M	FILL, silty SAND, Rubbish	
83 @ 0.15M	3/07/2017	M17-Jl02391	552701	0.15 M	FILL, silty SAND	
83 @ 0.50M	3/07/2017	M17-Jl02392	552701	0.50 M	FILL, silty SAND	
83 @ 1.00M	3/07/2017	M17-Jl02393	552701	1.00 M	FILL, silty SAND	
84 @ 0.15M	3/07/2017	M17-Jl02399	552701	0.15 M	FILL, silty SAND	
84 @ 0.50M	3/07/2017	M17-Jl02400	552701	0.50 M	FILL, silty SAND	
85 @ 0.15M	3/07/2017	M17-Jl02401	552701	0.15 M	FILL, silty SAND	
85 @ 0.50M	3/07/2017	M17-Jl02402	552701	0.50 M	FILL, silty SAND	
DUPLICATE 1	3/07/2017	M17-Jl02205	552701	1.00 M	FILL, sandy CLAY, Rubbish	
DUPLICATE 2	3/07/2017	M17-Jl02238	552701	0.50 M	FILL, silty SAND	
DUPLICATE 4	3/07/2017	M17-Jl02267	552701	0.50 M	FILL, sandy CLAY	
DUPLICATE 5	3/07/2017	M17-Jl02315	552701	2.00 M	FILL, silty SAND, Rubbish	
DUPLICATE 6	3/07/2017	M17-Jl02316	552701	1.00 M	FILL, silty SAND, Rubbish	
DUPLICATE 7	3/07/2017	M17-Jl02317	552701	1.50 M	FILL, sandy CLAY	
DUPLICATE 8	3/07/2017	M17-Jl02346	552701	0.50 M	FILL, silty SAND	
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish	
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND	
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish	
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY	
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish	
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish	
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY	

									Organophosphorous Pesticides	PAH			PAH/Phenols							
Field ID	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5
NEPM 2013 Table 1A(1) HILs Rec C Soil	20				10		400	30	250			3								
63 @ 1.50M	-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	-	-	-	-	-	-	-	-	-	1.7	2	2.2	-	-	-	-	-	-	-	-
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	<0.05	-	-	-	<0.05	-	<0.05	<1	<0.2	<0.5	0.6	1.2	-	-	<0.2	-	<0.4	-	-	-
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	PAH/Phenols																			
Field ID	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo[b+j]fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil																300		40000	5700	
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space															1900					
Sand 0-1m															NL					
Sand 1-2m															NL					
Sand 2-4m															NL					
Sand Csat															9					
Silt 0-1m															NL					
Silt 1-2m															NL					
Silt 2-4m															NL					
Silt Csat															10					
Clay 0-1m															NL					
Clay 1-2m															NL					
Clay 2-4m															NL					
Clay Csat															10					
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space															170					
US EPA ECO-SSL																18				
CSQG Residential/Parkland Use																		3.8		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil 0-2m					0.7															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil 0-2m					0.7															
63 @ 1.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	<0.5	<0.5	<0.5	1.1	1.3	1.2	1.2	1.3	1.1	<0.5	4.848	1.9	<0.5	0.8	<0.5	12.8	1	-	-	1.9
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	0.6	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	0.6
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Pesticides	Phenolics			Polychlorinated Biphenyls						
Field ID	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil	20										
63 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	<0.05	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

Human health: NEPM 2013 Table 1A(1) HILs Rec C Soil, CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space, NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion (Sand, Silt, Clay)

Maintenance of (highly modified) ecosystems: NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space, ANZECC 1992, US EPA ECO-SSL, CSQG Residential/Parkland Use, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil, NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil

									Organophosphorous Pesticides	PAH		
	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil	20				10		400	30	250			3
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand												
0-1m												
1-2m												
2-4m												
Csat												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt												
0-1m												
1-2m												
2-4m												
Csat												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay												
0-1m												
1-2m												
2-4m												
Csat												
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space												
ANZECC 1992												
US EPA ECO-SSL												
CSQG Residential/Parkland Use												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil												
0-2m												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil												
0-2m												
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary												
Number of Results	10	8	8	8	10	8	10	10	2	17	17	17
Minimum Concentration	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.5	0.6	1.2
Maximum Concentration	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	1.7	2	2.2
Average Concentration	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5		0.41	0.75	1.3
Median Concentration	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.1	0.25	0.6	1.2
Standard Deviation	0	0	0	0	0	0	0	0		0.41	0.38	0.26
Geometric Standard Deviation										1.8	1.4	1.2
95% ProUCL - 95% Chebyshev (Mean, Sd) UCL												
95% ProUCL - 95% Student's-t UCL												

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	

PAH/Phenols								
	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	5	0.2	1	0.4	5	1	5
SPLIT 8	-	-	-	-	-	-	-	-
Number of Results	9	9	11	9	11	9	9	9
Minimum Concentration	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5
Maximum Concentration	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5
Average Concentration	0.25	2.5	0.1	0.5	0.2	2.5	0.5	2.5
Median Concentration	0.25	2.5	0.1	0.5	0.2	2.5	0.5	2.5
Standard Deviation	0	0	0	0	0	0	0	0

PAH/Phenols											
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo(b+j)fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil 0-2m					0.7						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil 0-2m					0.7						
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-
Number of Results	17	17	17	17	17	17	17	17	17	17	17
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.126
Maximum Concentration	<0.5	<0.5	<0.5	1.1	1.3	1.2	1.2	1.3	1.1	<0.5	4.848
Average Concentration	0.25	0.25	0.25	0.33	0.36	0.33	0.33	0.36	0.34	0.25	1.4
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.107
Standard Deviation	0	0	0	0.23	0.29	0.25	0.24	0.28	0.23	0	0.96
Geometric Standard Deviation				1.5	1.7	1.6	1.5	1.6	1.6		1.5
95% ProUCL - 95% Student's-t UCL					0.66						

PAH/Phenols									
	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil					300		40000	5700	
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space				1900					
Sand 0-1m				NL					
Sand 1-2m				NL					
Sand 2-4m				NL					
Sand Csat				9					
Silt 0-1m				NL					
Silt 1-2m				NL					
Silt 2-4m				NL					
Silt Csat				10					
Clay 0-1m				NL					
Clay 1-2m				NL					
Clay 2-4m				NL					
Clay Csat				10					
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space				170					
US EPA ECO-SSL					18				
CSQG Residential/Parkland Use							3.8		
SPLIT 8	-	-	-	-	-	-	-	-	-
Number of Results	17	17	17	17	17	17	11	2	17
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Concentration	1.9	<0.5	0.8	1.1	12.8	1	<0.5	<2.5	1.9
Average Concentration	0.49	0.25	0.3	0.33	1.9	0.35	0.25		0.52
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.25
Standard Deviation	0.46	0	0.14	0.21	3.4	0.24	0		0.45
Geometric Standard Deviation	1.9		1.4	1.5	3.8	1.6		3.1	1.9

	Pesticides	Phenolics			Polychlorinated Biphenyls						
	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil	20										
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-
Number of Results	2	9	9	9	10	10	10	10	10	10	10
Minimum Concentration	<0.05	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Maximum Concentration	<0.05	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Average Concentration		10	0.5	10	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Median Concentration	0.025	10	0.5	10	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Standard Deviation		0	0	0	0	0	0	0	0	0	0

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

								Solvents						TPH								VOCs
								PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	Ethylbenzene plus BTEX (C6-C10)	Naphthalene (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil								1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																					5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																						
ANZECC 1992																						
US EPA ECO-SSL																						
CSOG Residential/Parkland Use								1 1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil														180	120							
0-2m																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																						
0-2m														180	120							
Human health																						
Maintenance of (highly modified) ecosystems.																						
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	95	110	205	<20	<2
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	22	160	<50	182	<20	<2
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-JI02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-JI02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-JI02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-JI02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-JI02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-JI02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-JI02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-JI02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-JI02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-JI02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-JI02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-JI02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-JI02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-JI02390	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
21 @ 0.15M	3/07/2017	M17-JI02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-JI02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-JI02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-JI02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-JI02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-JI02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-JI02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-JI02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-JI02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-JI02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-JI02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-JI02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-JI02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-JI02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-JI02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-JI02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-JI02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-JI02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-JI02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-JI02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-JI02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-JI02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-JI02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-JI02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-JI02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-JI02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-JI02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-JI02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-JI02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-JI02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-JI02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-JI02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-JI02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-JI02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-JI02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-JI02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-JI02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-JI02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

				Solvents						TPH								VOCs
				PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	Ft. minus BTEX (C6-C10)	f2-Naphth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil				1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																		
0-1m										NL	NL							
1-2m										NL	NL							
2-4m										NL	NL							
Csat										950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																		
0-1m										NL	NL							
1-2m										NL	NL							
2-4m										NL	NL							
Csat										910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																		
0-1m										NL	NL							
1-2m										NL	NL							
2-4m										NL	NL							
Csat										850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																		
ANZECC 1992																		
US EPA ECO-SSL																		
CSOG Residential/Parkland Use				1.1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										180	120							
0-2m																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
0-2m										180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**												
38 @ 0.50M	3/07/2017	M17-JI02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-JI02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-JI02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-JI02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-JI02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-JI02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-JI02254	552701	1.50 M	FILL, silty SAND, Rubbish		<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 3.00M	3/07/2017	M17-JI02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-JI02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-JI02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-JI02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-JI02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-JI02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-JI02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-JI02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-JI02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-JI02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-JI02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-JI02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-JI02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-JI02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-JI02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-JI02220	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	97	<20	73	520	430	1023	<20	-
47 @ 3.00M	3/07/2017	M17-JI02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-JI02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-JI02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-JI02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-JI02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-JI02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-JI02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-JI02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-JI02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-JI02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
51 @ 3.00M	3/07/2017	M17-JI02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-JI02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-JI02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-JI02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-JI02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-JI02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-JI02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-JI02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-JI02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-JI02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-JI02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-JI02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-JI02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	<20	<50	<20	<20	670	300	970	<20	-
54 @ 3.00M	3/07/2017	M17-JI02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-JI02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-JI02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-JI02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-JI02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-JI02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-JI02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-JI02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-JI02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-JI02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-JI02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-JI02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-JI02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-JI02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-JI02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-JI02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-JI02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-JI02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-JI02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-JI02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-JI02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-JI02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-JI02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-JI02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-JI02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-JI02199	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	<50	<20	<20	280	94	374	<20	-
63 @ 0.15M	3/07/2017	M17-JI02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-JI02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-JI02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			Solvents						TPH									VOCs
			PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	F1 minus BTEX (C6-C10)	F2 -Naptth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil			1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m									NL	NL							
1-2m									NL	NL							
2-4m									NL	NL							
Csat									950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m									NL	NL							
1-2m									NL	NL							
2-4m									NL	NL							
Csat									910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m									NL	NL							
1-2m									NL	NL							
2-4m									NL	NL							
Csat									850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																	
ANZECC 1992																	
US EPA ECO-SSL																	
CSOG Residential/Parkland Use			1.1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									180	120							
0-2m																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m									180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**											
63 @ 1.50M	3/07/2017	M17-JI02212	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	<50	<20	<20	200	200	400	<20	-
63 @ 3.00M	3/07/2017	M17-JI02214	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	3/07/2017	M17-JI02303	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	3/07/2017	M17-JI02304	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	3/07/2017	M17-JI02305	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	3/07/2017	M17-JI02285	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	3/07/2017	M17-JI02286	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	3/07/2017	M17-JI02287	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	3/07/2017	M17-JI02288	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	3/07/2017	M17-JI02289	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	3/07/2017	M17-JI02370	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	3/07/2017	M17-JI02268	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	3/07/2017	M17-JI02269	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	3/07/2017	M17-JI02193	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	3/07/2017	M17-JI02194	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	3/07/2017	M17-JI02195	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	<20	<50	<20	<20	74	53	127	<20	-
68 @ 2.00M	3/07/2017	M17-JI02196	552701	2.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	3/07/2017	M17-JI02297	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	3/07/2017	M17-JI02298	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	3/07/2017	M17-JI02299	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	3/07/2017	M17-JI02300	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	3/07/2017	M17-JI02301	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	3/07/2017	M17-JI02328	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	3/07/2017	M17-JI02329	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	3/07/2017	M17-JI02330	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	3/07/2017	M17-JI02331	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	3/07/2017	M17-JI02377	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	3/07/2017	M17-JI02256	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	3/07/2017	M17-JI02257	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	3/07/2017	M17-JI02189	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	3/07/2017	M17-JI02190	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	3/07/2017	M17-JI02191	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
73 @ 3.00M	3/07/2017	M17-JI02192	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	3/07/2017	M17-JI02206	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	3/07/2017	M17-JI02207	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	3/07/2017	M17-JI02208	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	3/07/2017	M17-JI02291	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	3/07/2017	M17-JI02292	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	3/07/2017	M17-JI02293	552701	1.50 M	FILL, silty SAND, Rubbish		<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.00M	3/07/2017	M17-JI02294	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	3/07/2017	M17-JI02295	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	3/07/2017	M17-JI02290	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	3/07/2017	M17-JI02403	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	3/07/2017	M17-JI02375	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	3/07/2017	M17-JI02376	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	3/07/2017	M17-JI02373	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	3/07/2017	M17-JI02374	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	3/07/2017	M17-JI02371	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	3/07/2017	M17-JI02372	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	3/07/2017	M17-JI02398	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	3/07/2017	M17-JI02394	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	3/07/2017	M17-JI02395	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	3/07/2017	M17-JI02396	552701	2.00 M	FILL, silty SAND, Rubbish		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
82 @ 3.00M	3/07/2017	M17-JI02397	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	3/07/2017	M17-JI02391	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	3/07/2017	M17-JI02392	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	3/07/2017	M17-JI02393	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	3/07/2017	M17-JI02399	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	3/07/2017	M17-JI02400	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	3/07/2017	M17-JI02401	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	3/07/2017	M17-JI02402	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	3/07/2017	M17-JI02205	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	3/07/2017	M17-JI02238	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	3/07/2017	M17-JI02267	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	3/07/2017	M17-JI02315	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	3/07/2017	M17-JI02316	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	3/07/2017	M17-JI02317	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	3/07/2017	M17-JI02346	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								Solvents						TPH								VOCs
								PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	F1 minus BTEX (C6-C10)	F2 -Naptth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil								1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																					5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																						
ANZECC 1992																						
US EPA ECO-SSL																						
CSOG Residential/Parkland Use								1 1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil														180	120							
0-2m																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																						
0-2m														180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**																
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																						
Number of Results								10	8	8	8	8	8	15	15	15	15	15	15	15	15	8
Minimum Concentration								<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Maximum Concentration								<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	97	<20	73	670	430	1023	<20	<2
Average Concentration								0.05	0.25	0.25	0.25	0.25	0.25	10	30	10	15	147	94	232	10	1
Median Concentration								0.05	0.25	0.25	0.25	0.25	0.25	10	25	10	10	25	25	25	10	1
Standard Deviation								0	0	0	0	0	0	0	19	0	16	200	123	335	0	0
Geometric Standard Deviation															1.4		1.7	3.4	2.8	4.3		
95% ProUCL	95% Chebyshev (Mean, Sd) UCL																					
	95% Student's-t UCL																					

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be
Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

		Heavy Metal	OCP		BTEX						Chlorinated Hydrocarbons																											
		Iron (%)	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic
		%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.01			0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil																																						
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space					120	5300	18000			15000																												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																						
0-1m					NL	NL	NL			NL																												
1-2m					NL	NL	NL			NL																												
2-4m					NL	NL	NL			NL																												
Csat					360	64	560			300																												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																						
0-1m	Human health				NL	NL	NL			NL																												
1-2m					NL	NL	NL			NL																												
2-4m					NL	NL	NL			NL																												
Csat					440	69	640			330																												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																						
0-1m					NL	NL	NL			NL																												
1-2m					NL	NL	NL			NL																												
2-4m					NL	NL	NL			NL																												
Csat					430	68	630			330																												
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																						
ANZECC 1992																																						
US EPA ECO-SSL																																						
CSQG Residential/Parkland Use														5																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil	Maintenance of (highly modified) ecosystems.				65		105																															
0-2m						125				45																												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																						
0-2m					50	70	85			105																												

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds	Iron (%)	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		-	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		1.2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		0.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		-	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8

Statistical Summary	Iron (%)	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic
Number of Results	2	2	2	7	7	7	7	7	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum Concentration	0.92	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
Maximum Concentration	1.2	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
Average Concentration				0.05	0.05	0.05	0.1	0.05	0.15																													
Median Concentration	1.06	0.5	0.375	0.05	0.05	0.05	0.1	0.05	0.15	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4
Standard Deviation				0	0	0	0	0	0																													
Geometric Standard Deviation	1.2																																					

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

Criteria		Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene
			Halogenated Benzenes							
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health									**10**
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand										
0-1m										
1-2m										
2-4m										
Csat										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt										
0-1m										
1-2m										
2-4m										
Csat										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay										
0-1m										
1-2m										
2-4m										
Csat										
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.									
ANZECC 1992										
US EPA ECO-SSL										
CSQG Residential/Parkland Use										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										
0-2m										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil										
0-2m										

Criteria	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols	Dinoseb
	Halogenated Hydrocarbons					Halogenated Phenols							Herbicides
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5	1	1	20
NEPM 2013 Table 1A(1) HILs Rec C Soil											**120**		
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space													
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand													
0-1m													
1-2m													
2-4m													
Csat													
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt													
0-1m													
1-2m													
2-4m													
Csat													
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay													
0-1m													
1-2m													
2-4m													
Csat													
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space													
ANZECC 1992													
US EPA ECO-SSL													
CSQG Residential/Parkland Use													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil													
0-2m													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil													
0-2m													

Criteria	% Clay	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	Cation Exchange Capacity	Total Organic Carbon	pH (aqueous extract)	pH (Lab)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic	Arsenic
	Inorganic	Inorganics							Lead	MAH					
	%	mg/kg	mg/kg	%			pH_Units	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	1	5	100	1			0.1	0.1	5	0.5	0.5	0.5	0.5		2
NEPM 2013 Table 1A(1) HILs Rec C Soil									**600**						**300**
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space			450						1100						100
ANZECC 1992							<6 and >8								
US EPA ECO-SSL															
CSQG Residential/Parkland Use															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil															
0-2m															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil															
0-2m															

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds	Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND	Round 2	-	-	-	-	-	-	-	-	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	-	-	-	-	-	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Statistical Summary															
Number of Results							2	2	2	2	2	2	2	2	2
Minimum Concentration							<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Maximum Concentration							<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Average Concentration															
Median Concentration							3.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.025
Standard Deviation															
Geometric Standard Deviation															

Field ID	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols	Dinoseb
4 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
13 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
16 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
22 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
28 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
35 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
58 @ 2.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
Statistical Summary													
Number of Results	2	2	2	2	2	7	7	7	7	7	7	7	7
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20
Average Concentration						0.5	0.5	0.25	0.25	0.25	0.5	0.5	10
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.5	0.5	10
Standard Deviation						0	0	0	0	0	0	0	0
Geometric Standard Deviation													

Field ID	% Clay	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	Cation Exchange Capacity	Total Organic Carbon	pH (aqueous extract)	pH (Lab)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic	Arsenic
4 AT 1.50M	-	-	-	10	-	-	-	-	10	-	-	-	-	-	5.4
13 @ 2.00M	-	-	-	7	-	-	-	-	-	-	-	-	-	<0.6	-
13 @ 3.00M	-	-	-	4.8	-	-	-	-	5.6	-	-	-	-	-	<2
16 @ 2.50M	-	<5	<100	3.7	-	-	7.2	-	26	<0.5	<0.5	<0.5	<0.5	<1.1	<2
16 @ 3.00M	-	-	-	6	-	-	-	-	15	-	-	-	-	-	<2
18 @ 0.15M	-	-	-	2.7	-	-	-	-	27	-	-	-	-	-	<2
18 @ 0.50M	-	-	-	1.1	-	-	-	-	<5	-	-	-	-	-	<2
19 @ 0.15M	-	-	-	5	-	-	-	-	<5	-	-	-	-	-	<2
19 @ 0.50M	-	-	-	3.7	-	-	-	-	<5	-	-	-	-	-	<2
21 @ 2.50M	-	-	-	7.4	-	-	-	-	-	-	-	-	-	<0.6	-
22 @ 3.00M	-	-	-	17	-	-	-	-	6	-	-	-	-	-	2.7
23 @ 0.15M	-	-	-	4.7	-	-	-	-	5.7	-	-	-	-	-	<2
23 @ 0.50M	-	-	-	4.3	-	-	-	-	15	-	-	-	-	-	<2
23 @ 2.50M	23	-	-	14	14	0.2	-	7.2	-	-	-	-	-	<0.6	-
28 @ 2.50M	-	-	-	9.3	-	-	-	-	<5	-	-	-	-	-	<2
35 @ 1.50M	-	-	-	8.1	-	-	-	-	-	-	-	-	-	<0.6	-
35 @ 2.00M	-	-	-	5.6	-	-	-	-	<5	-	-	-	-	-	<2
35 @ 2.50M	-	-	-	6.5	-	-	-	-	<5	-	-	-	-	-	<2
35 @ 3.00M	-	-	-	12	-	-	-	-	<5	-	-	-	-	-	<2
36 @ 2.00M	-	-	-	8.1	-	-	-	-	<5	-	-	-	-	-	<2
36 @ 2.50M	-	-	-	11	-	-	-	-	<5	-	-	-	-	-	<2
36 @ 3.00M	-	-	-	15	-	-	-	-	9.2	-	-	-	-	-	<2
43 @ 2.00M	-	-	-	3	-	-	-	-	38	-	-	-	-	-	2.7
43 @ 3.00M	-	-	-	3	-	-	-	-	36	-	-	-	-	-	2.4
50 @ 1.00M	6.3	-	-	5	25	1.4	-	7.7	-	-	-	-	-	-	-
50 @ 2.50M	-	-	-	11	-	-	-	-	7.6	-	-	-	-	-	2.3
50 @ 3.00M	-	-	-	9.1	-	-	-	-	-	-	-	-	-	<0.6	-
58 @ 2.50M	-	<5	<100	5.7	-	-	7.2	-	<5	<0.5	<0.5	<0.5	<0.5	<1.1	<2
Statistical Summary															
Number of Results	2	2	2	28	2	2	2	2	22	2	2	2	2	7	22
Minimum Concentration	6.3	<5	<100	1.1	14	0.2	7.2	7.2	<5	<0.5	<0.5	<0.5	<0.5	<0.6	<2
Maximum Concentration	23	<5	<100	17	25	1.4	7.2	7.7	38	<0.5	<0.5	<0.5	<0.5	<1.1	5.4
Average Concentration				7.3					10					0.37	1.5
Median Concentration	14.65	2.5	50	6.25	19.5	0.8	7.2	7.45	5.65	0.25	0.25	0.25	0.25	0.3	1
Standard Deviation				4					11					0.12	1.1
Geometric Standard Deviation	2.5			1.8	1.5	4		1	2.7					1.3	1.6

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

							Metals												Organic		
							Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Copper	Iron	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG
EQL							0.4	1	2	5	20	0.1	2	2	2	0.2	5	5	50	100	100
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health						**90**	**300**		**17000**		**80**		**1200**	**700**			**30000**			
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																			**3800**	**5300**	**7400**
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																					
0-1m																					
1-2m																					
2-4m																					
Csat																					
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																					
0-1m																					
1-2m																					
2-4m																					
Csat																					
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																					
0-1m																					
1-2m																					
2-4m																					
Csat																					
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.								410	220				270	10			730			
ANZECC 1992																	50				
US EPA ECO-SSL								130					6.6								
CSQG Residential/Parkland Use							10														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				1300	5600
0-2m																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																					
0-2m																				300	2800
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**															
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	<0.4	-	27	<5	-	<0.1	<5	9.2	<2	<0.2	<10	9.6	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		<0.4	-	7.2	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<0.4	<1	6.4	8.7	-	<0.1	<5	<5	<2	<0.2	<10	20	<50	<100	<100
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		<0.4	-	15	<5	-	<0.1	<5	<5	<2	<0.2	<10	11	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		<0.4	-	<5	<5	-	0.2	<5	<5	<2	<0.2	<10	12	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		<0.4	-	15	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		<0.4	-	<5	5.3	-	<0.1	<5	5.6	<2	<0.2	<10	14	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		<0.4	-	<5	6.6	-	<0.1	<5	5.9	<2	<0.2	<10	18	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		-	-	-	-	12,000	-	-	-	-	-	-	-	<50	<100	<100
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	6.5	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	9.9	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		<0.4	-	19	<5	-	<0.1	<5	6.5	<2	<0.2	<10	6.9	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		0.4	-	6.3	13	-	<0.1	<5	16	<2	<0.2	<10	450	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		<0.4	-	<5	17	-	<0.1	<5	7.5	<2	<0.2	<10	200	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	9200	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		<0.4	-	8.5	<5	-	<0.1	<5	<5	<2	<0.2	<10	5.8	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<0.4	<1	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	9.9	<50	<100	<100
Statistical Summary																					
Number of Results							22	2	22	22	2	22	22	22	22	22	22	22	7	7	7
Minimum Concentration							<0.4	<1	<5	<5	9200	<0.1	<5	<5	<2	<0.2	<10	<5	<50	<100	<100
Maximum Concentration							0.4	<1	27	17	12000	0.2	<5	16	<2	<0.2	<10	450	<50	<100	<100
Average Concentration							0.21		6.3	4.2		0.057	2.5	4.1	1	0.1	5	36	25	50	50
Median Concentration							0.2	0.5	2.5	2.5	10600	0.05	2.5	2.5	1	0.1	5	6.7	25	50	50
Standard Deviation							0.043		6.7	3.9		0.032	0	3.3	0	0	0	101	0	0	0
Geometric Standard Deviation							1.2		2.3	1.8	1.2	1.3		1.7				4.1			

	Organochlorine Pesticides																					
	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
NEPM 2013 Table 1A(1) HILs Rec C Soil				**10**		**70**				**400**					**20**				**10**		**400**	**30**
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																						
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																						
0-1m																						
1-2m																						
2-4m																						
Csat																						
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																						
0-1m																						
1-2m																						
2-4m																						
Csat																						
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																						
0-1m																						
1-2m																						
2-4m																						
Csat																						
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																						
ANZECC 1992																						
US EPA ECO-SSL																						
CSQG Residential/Parkland Use																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																						
0-2m																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																						
0-2m																						
Field ID																						
4 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
16 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 2.50M	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Statistical Summary																						
Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum Concentration	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Maximum Concentration	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Average Concentration																						
Median Concentration	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.075	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5
Standard Deviation																						
Geometric Standard Deviation																						

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

							PAH			PAH/Phenols																						Phenolics			Polychlorinated Biph				
							Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo(b+j)fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Pyrene	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248
							MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	1	20	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil									3																								300		40000								
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																1900										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																									
0-1m																																NL										
1-2m																																NL										
2-4m																																NL										
Csat																																9										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																									
0-1m																																NL										
1-2m																																NL										
2-4m																																NL										
Csat																																10										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																									
0-1m																																NL										
1-2m																																NL										
2-4m																																NL										
Csat																																10										
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																170										
ANZECC 1992																																									
US EPA ECO-SSL																																	18									
CSQG Residential/Parkland Use																																			3.8							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																									
0-2m																							0.7																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																									
0-2m																							0.7																			

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																					
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
Statistical Summary																																										
Number of Results							7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	2	2	2	2	2
Minimum Concentration							<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
Maximum Concentration							<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
Average Concentration							0.25	0.6	1.2	0.25	2.5	0.1	0.5	0.2	2.5	0.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	10	0.5	10					
Median Concentration							0.25	0.6	1.2	0.25	2.5	0.1	0.5	0.2	2.5	0.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.107	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	10	0.5	10	0.05	0.05	0.05	0.05	0.05
Standard Deviation							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Geometric Standard Deviation																																										

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

							enyls			Solvents					TPH								VOCs
							Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	F1 minus BTEX (C6-C10)	F2-Napth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil									1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																						5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																							
0-1m															NL	NL							
1-2m															NL	NL							
2-4m															NL	NL							
Csat															950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																							
0-1m					Human health										NL	NL							
1-2m															NL	NL							
2-4m															NL	NL							
Csat															910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																							
0-1m															NL	NL							
1-2m															NL	NL							
2-4m															NL	NL							
Csat															850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																							
ANZECC 1992																							
US EPA ECO-SSL																							
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.				1.3														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil															180	120							
0-2m																							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																							
0-2m															180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**																	
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Statistical Summary																							
Number of Results							2	2	2	2	2	2	2	2	7	7	7	7	7	7	7	7	2
Minimum Concentration							<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Maximum Concentration							<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Average Concentration															10	25	10	10	25	25	25	10	
Median Concentration							0.05	0.05	0.05	0.25	0.25	0.25	0.25	0.25	10	25	10	10	25	25	25	10	1
Standard Deviation															0	0	0	0	0	0	0	0	
Geometric Standard Deviation																							

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.118/07/2017 10:56:09 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Lead

General Statistics

Total Number of Observations	225	Number of Distinct Observations	97
		Number of Missing Observations	1
Minimum	5	Mean	95.29
Maximum	7200	Median	43
SD	484.8	Std. Error of Mean	32.32
Coefficient of Variation	5.087	Skewness	14.22

Normal GOF Test

Shapiro Wilk Test Statistic	0.138	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.426	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0595	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	148.7	95% Adjusted-CLT UCL (Chen-1995)	181.2
		95% Modified-t UCL (Johnson-1978)	153.8

Gamma GOF Test

A-D Test Statistic	4.444E+28	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.796	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.222	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.0632	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.749	k star (bias corrected MLE)	0.742
Theta hat (MLE)	127.3	Theta star (bias corrected MLE)	128.5
nu hat (MLE)	337	nu star (bias corrected)	333.8
MLE Mean (bias corrected)	95.29	MLE Sd (bias corrected)	110.6
		Approximate Chi Square Value (0.05)	292.5
Adjusted Level of Significance	0.0489	Adjusted Chi Square Value	292.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	108.8	95% Adjusted Gamma UCL (use when n<50)	108.9

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	2.3384E-8	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0906	**Lilliefors Lognormal GOF Test**

55				5% Lilliefors Critical Value		0.0595		Data Not Lognormal at 5% Significance Level				
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59				Minimum of Logged Data		1.609		Mean of logged Data				3.757
60				Maximum of Logged Data		8.882		SD of logged Data				0.928
61												
62	**Assuming Lognormal Distribution**											
63				95% H-UCL		75		90% Chebyshev (MVUE) UCL				80.17
64				95% Chebyshev (MVUE) UCL		86.72		97.5% Chebyshev (MVUE) UCL				95.82
65				99% Chebyshev (MVUE) UCL		113.7						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data do not follow a Discernible Distribution (0.05)**											
69												
70	**Nonparametric Distribution Free UCLs**											
71				95% CLT UCL		148.4		95% Jackknife UCL				148.7
72				95% Standard Bootstrap UCL		148.6		95% Bootstrap-t UCL				361.3
73				95% Hall's Bootstrap UCL		335.3		95% Percentile Bootstrap UCL				158.1
74				95% BCA Bootstrap UCL		193.8						
75				90% Chebyshev(Mean, Sd) UCL		192.2		95% Chebyshev(Mean, Sd) UCL				236.2
76				97.5% Chebyshev(Mean, Sd) UCL		297.1		99% Chebyshev(Mean, Sd) UCL				416.8
77												
78	**Suggested UCL to Use**											
79				95% Chebyshev (Mean, Sd) UCL		236.2						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86												
87	**Arsenic**											
88												
89	**General Statistics**											
90				Total Number of Observations		225		Number of Distinct Observations				78
91								Number of Missing Observations				1
92				Minimum		2		Mean				7.019
93				Maximum		110		Median				4.7
94				SD		11.01		Std. Error of Mean				0.734
95				Coefficient of Variation		1.569		Skewness				7.564
96												
97	**Normal GOF Test**											
98				Shapiro Wilk Test Statistic		0.39		**Shapiro Wilk GOF Test**				
99				5% Shapiro Wilk P Value		0		Data Not Normal at 5% Significance Level				
100				Lilliefors Test Statistic		0.324		**Lilliefors GOF Test**				
101				5% Lilliefors Critical Value		0.0595		Data Not Normal at 5% Significance Level				
102	**Data Not Normal at 5% Significance Level**											
103												
104	**Assuming Normal Distribution**											
105	**95% Normal UCL**							**95% UCLs (Adjusted for Skewness)**				
106				95% Student's-t UCL		8.231		95% Adjusted-CLT UCL (Chen-1995)				8.622
107								95% Modified-t UCL (Johnson-1978)				8.293
108												

109	**Gamma GOF Test**											
110	A-D Test Statistic				8.937	**Anderson-Darling Gamma GOF Test**						
111	5% A-D Critical Value				0.771	Data Not Gamma Distributed at 5% Significance Level						
112	K-S Test Statistic				0.158	**Kolmogorov-Smirnov Gamma GOF Test**						
113	5% K-S Critical Value				0.0619	Data Not Gamma Distributed at 5% Significance Level						
114	**Data Not Gamma Distributed at 5% Significance Level**											
115												
116	**Gamma Statistics**											
117	k hat (MLE)				1.544	k star (bias corrected MLE)						1.526
118	Theta hat (MLE)				4.546	Theta star (bias corrected MLE)						4.598
119	nu hat (MLE)				694.8	nu star (bias corrected)						686.9
120	MLE Mean (bias corrected)				7.019	MLE Sd (bias corrected)						5.681
121						Approximate Chi Square Value (0.05)						627.1
122	Adjusted Level of Significance				0.0489	Adjusted Chi Square Value						626.7
123												
124	**Assuming Gamma Distribution**											
125	95% Approximate Gamma UCL (use when n>=50))				7.688	95% Adjusted Gamma UCL (use when n<50)						7.693
126												
127	**Lognormal GOF Test**											
128	Shapiro Wilk Test Statistic				0.91	**Shapiro Wilk Lognormal GOF Test**						
129	5% Shapiro Wilk P Value				0	Data Not Lognormal at 5% Significance Level						
130	Lilliefors Test Statistic				0.109	**Lilliefors Lognormal GOF Test**						
131	5% Lilliefors Critical Value				0.0595	Data Not Lognormal at 5% Significance Level						
132	**Data Not Lognormal at 5% Significance Level**											
133												
134	**Lognormal Statistics**											
135	Minimum of Logged Data				0.693	Mean of logged Data						1.591
136	Maximum of Logged Data				4.7	SD of logged Data						0.729
137												
138	**Assuming Lognormal Distribution**											
139	95% H-UCL				7.038	90% Chebyshev (MVUE) UCL						7.437
140	95% Chebyshev (MVUE) UCL				7.909	97.5% Chebyshev (MVUE) UCL						8.566
141	99% Chebyshev (MVUE) UCL				9.854							
142												
143	**Nonparametric Distribution Free UCL Statistics**											
144	**Data do not follow a Discernible Distribution (0.05)**											
145												
146	**Nonparametric Distribution Free UCLs**											
147	95% CLT UCL				8.226	95% Jackknife UCL						8.231
148	95% Standard Bootstrap UCL				8.228	95% Bootstrap-t UCL						9.323
149	95% Hall's Bootstrap UCL				14.57	95% Percentile Bootstrap UCL						8.271
150	95% BCA Bootstrap UCL				8.73							
151	90% Chebyshev(Mean, Sd) UCL				9.221	95% Chebyshev(Mean, Sd) UCL						10.22
152	97.5% Chebyshev(Mean, Sd) UCL				11.6	99% Chebyshev(Mean, Sd) UCL						14.32
153												
154	**Suggested UCL to Use**											
155	95% Chebyshev (Mean, Sd) UCL				10.22							
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												
162												

163	**Cadmium**										
164											
165	**General Statistics**										
166				Total Number of Observations	225			Number of Distinct Observations	13		
167								Number of Missing Observations	1		
168				Minimum	0.4			Mean	0.539		
169				Maximum	14			Median	0.4		
170				SD	0.954			Std. Error of Mean	0.0636		
171				Coefficient of Variation	1.769			Skewness	12.84		
172											
173	**Normal GOF Test**										
174				Shapiro Wilk Test Statistic	0.16			**Shapiro Wilk GOF Test**			
175				5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
176				Lilliefors Test Statistic	0.442			**Lilliefors GOF Test**			
177				5% Lilliefors Critical Value	0.0595			Data Not Normal at 5% Significance Level			
178	**Data Not Normal at 5% Significance Level**										
179											
180	**Assuming Normal Distribution**										
181				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
182				95% Student's-t UCL	0.644			95% Adjusted-CLT UCL (Chen-1995)	0.702		
183								95% Modified-t UCL (Johnson-1978)	0.653		
184											
185	**Gamma GOF Test**										
186				A-D Test Statistic	4.444E+28			**Anderson-Darling Gamma GOF Test**			
187				5% A-D Critical Value	0.761			Data Not Gamma Distributed at 5% Significance Level			
188				K-S Test Statistic	0.482			**Kolmogorov-Smirnov Gamma GOF Test**			
189				5% K-S Critical Value	0.0612			Data Not Gamma Distributed at 5% Significance Level			
190	**Data Not Gamma Distributed at 5% Significance Level**										
191											
192	**Gamma Statistics**										
193				k hat (MLE)	2.884			k star (bias corrected MLE)	2.848		
194				Theta hat (MLE)	0.187			Theta star (bias corrected MLE)	0.189		
195				nu hat (MLE)	1298			nu star (bias corrected)	1282		
196				MLE Mean (bias corrected)	0.539			MLE Sd (bias corrected)	0.319		
197								Approximate Chi Square Value (0.05)	1200		
198				Adjusted Level of Significance	0.0489			Adjusted Chi Square Value	1199		
199											
200	**Assuming Gamma Distribution**										
201				95% Approximate Gamma UCL (use when n>=50))	0.576			95% Adjusted Gamma UCL (use when n<50)	0.576		
202											
203	**Lognormal GOF Test**										
204				Shapiro Wilk Test Statistic	0.356			**Shapiro Wilk Lognormal GOF Test**			
205				5% Shapiro Wilk P Value	0			Data Not Lognormal at 5% Significance Level			
206				Lilliefors Test Statistic	0.486			**Lilliefors Lognormal GOF Test**			
207				5% Lilliefors Critical Value	0.0595			Data Not Lognormal at 5% Significance Level			
208	**Data Not Lognormal at 5% Significance Level**										
209											
210	**Lognormal Statistics**										
211				Minimum of Logged Data	-0.916			Mean of logged Data	-0.801		
212				Maximum of Logged Data	2.639			SD of logged Data	0.395		
213											
214	**Assuming Lognormal Distribution**										
215				95% H-UCL	0.508			90% Chebyshev (MVUE) UCL	0.525		
216				95% Chebyshev (MVUE) UCL	0.543			97.5% Chebyshev (MVUE) UCL	0.568		

217				99% Chebyshev (MVUE) UCL		0.617						
218												
219						**Nonparametric Distribution Free UCL Statistics**							
220						**Data do not follow a Discernible Distribution (0.05)**							
221												
222						**Nonparametric Distribution Free UCLs**							
223				95% CLT UCL		0.644		95% Jackknife UCL				0.644
224				95% Standard Bootstrap UCL		0.641		95% Bootstrap-t UCL				0.879
225				95% Hall's Bootstrap UCL		0.994		95% Percentile Bootstrap UCL				0.661
226				95% BCA Bootstrap UCL		0.745						
227				90% Chebyshev(Mean, Sd) UCL		0.73		95% Chebyshev(Mean, Sd) UCL				0.816
228				97.5% Chebyshev(Mean, Sd) UCL		0.936		99% Chebyshev(Mean, Sd) UCL				1.172
229												
230						**Suggested UCL to Use**							
231				95% Student's-t UCL		0.644		or 95% Modified-t UCL				0.653
232												
233						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
234						Recommendations are based upon data size, data distribution, and skewness.							
235						These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
236						However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
237												
238												
239	**Copper**											
240												
241						**General Statistics**							
242				Total Number of Observations		225		Number of Distinct Observations				74
243								Number of Missing Observations				1
244				Minimum		5		Mean				774.6
245				Maximum		170000		Median				12
246				SD		11332		Std. Error of Mean				755.5
247				Coefficient of Variation		14.63		Skewness				15
248												
249						**Normal GOF Test**							
250				Shapiro Wilk Test Statistic		0.0677		**Shapiro Wilk GOF Test**				
251				5% Shapiro Wilk P Value		0		Data Not Normal at 5% Significance Level				
252				Lilliefors Test Statistic		0.514		**Lilliefors GOF Test**				
253				5% Lilliefors Critical Value		0.0595		Data Not Normal at 5% Significance Level				
254						**Data Not Normal at 5% Significance Level**							
255												
256						**Assuming Normal Distribution**							
257				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**				
258				95% Student's-t UCL		2022		95% Adjusted-CLT UCL (Chen-1995)				2824
259								95% Modified-t UCL (Johnson-1978)				2148
260												
261						**Gamma GOF Test**							
262				A-D Test Statistic		4.444E+28		**Anderson-Darling Gamma GOF Test**				
263				5% A-D Critical Value		0.935		Data Not Gamma Distributed at 5% Significance Level				
264				K-S Test Statistic		0.471		**Kolmogorov-Smirnov Gamma GOF Test**				
265				5% K-S Critical Value		0.0679		Data Not Gamma Distributed at 5% Significance Level				
266						**Data Not Gamma Distributed at 5% Significance Level**							
267												
268						**Gamma Statistics**							
269				k hat (MLE)		0.185		k star (bias corrected MLE)				0.185
270				Theta hat (MLE)		4193		Theta star (bias corrected MLE)				4182

271					nu hat (MLE)	83.13				nu star (bias corrected)		83.35
272					MLE Mean (bias corrected)	774.6				MLE Sd (bias corrected)		1800
273										Approximate Chi Square Value (0.05)		63.31
274					Adjusted Level of Significance	0.0489				Adjusted Chi Square Value		63.2
275												
276					**Assuming Gamma Distribution**							
277					95% Approximate Gamma UCL (use when n>=50))	1020				95% Adjusted Gamma UCL (use when n<50)		1022
278												
279					**Lognormal GOF Test**							
280					Shapiro Wilk Test Statistic	0.766				**Shapiro Wilk Lognormal GOF Test**		
281					5% Shapiro Wilk P Value	0				Data Not Lognormal at 5% Significance Level		
282					Lilliefors Test Statistic	0.155				**Lilliefors Lognormal GOF Test**		
283					5% Lilliefors Critical Value	0.0595				Data Not Lognormal at 5% Significance Level		
284					**Data Not Lognormal at 5% Significance Level**							
285												
286					**Lognormal Statistics**							
287					Minimum of Logged Data	1.609				Mean of logged Data		2.619
288					Maximum of Logged Data	12.04				SD of logged Data		0.993
289												
290					**Assuming Lognormal Distribution**							
291					95% H-UCL	25.92				90% Chebyshev (MVUE) UCL		27.8
292					95% Chebyshev (MVUE) UCL	30.24				97.5% Chebyshev (MVUE) UCL		33.62
293					99% Chebyshev (MVUE) UCL	40.28						
294												
295					**Nonparametric Distribution Free UCL Statistics**							
296					**Data do not follow a Discernible Distribution (0.05)**							
297												
298					**Nonparametric Distribution Free UCLs**							
299					95% CLT UCL	2017				95% Jackknife UCL		2022
300					95% Standard Bootstrap UCL	2028				95% Bootstrap-t UCL		525443
301					95% Hall's Bootstrap UCL	208730				95% Percentile Bootstrap UCL		2285
302					95% BCA Bootstrap UCL	3042						
303					90% Chebyshev(Mean, Sd) UCL	3041				95% Chebyshev(Mean, Sd) UCL		4068
304					97.5% Chebyshev(Mean, Sd) UCL	5493				99% Chebyshev(Mean, Sd) UCL		8291
305												
306					**Suggested UCL to Use**							
307					95% Chebyshev (Mean, Sd) UCL	4068						
308												
309	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
310	Recommendations are based upon data size, data distribution, and skewness.											
311	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
312	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
313												
314												
315	**Nickel**											
316												
317					**General Statistics**							
318					Total Number of Observations	225				Number of Distinct Observations		60
319										Number of Missing Observations		1
320					Minimum	2				Mean		12.72
321					Maximum	300				Median		9.6
322					SD	20.51				Std. Error of Mean		1.367
323					Coefficient of Variation	1.612				Skewness		12.42
324												

325	**Normal GOF Test**											
326				Shapiro Wilk Test Statistic		0.296	**Shapiro Wilk GOF Test**					
327				5% Shapiro Wilk P Value		0	Data Not Normal at 5% Significance Level					
328				Lilliefors Test Statistic		0.349	**Lilliefors GOF Test**					
329				5% Lilliefors Critical Value		0.0595	Data Not Normal at 5% Significance Level					
330	**Data Not Normal at 5% Significance Level**											
331												
332	**Assuming Normal Distribution**											
333	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
334				95% Student's-t UCL		14.98	95% Adjusted-CLT UCL (Chen-1995)					16.18
335							95% Modified-t UCL (Johnson-1978)					15.17
336												
337	**Gamma GOF Test**											
338				A-D Test Statistic		4.444E+28	**Anderson-Darling Gamma GOF Test**					
339				5% A-D Critical Value		0.766	Data Not Gamma Distributed at 5% Significance Level					
340				K-S Test Statistic		0.173	**Kolmogorov-Smirnov Gamma GOF Test**					
341				5% K-S Critical Value		0.0615	Data Not Gamma Distributed at 5% Significance Level					
342	**Data Not Gamma Distributed at 5% Significance Level**											
343												
344	**Gamma Statistics**											
345				k hat (MLE)		2.096	k star (bias corrected MLE)					2.071
346				Theta hat (MLE)		6.069	Theta star (bias corrected MLE)					6.143
347				nu hat (MLE)		943.3	nu star (bias corrected)					932.1
348				MLE Mean (bias corrected)		12.72	MLE Sd (bias corrected)					8.84
349							Approximate Chi Square Value (0.05)					862.2
350				Adjusted Level of Significance		0.0489	Adjusted Chi Square Value					861.8
351												
352	**Assuming Gamma Distribution**											
353				95% Approximate Gamma UCL (use when n>=50))		13.75	95% Adjusted Gamma UCL (use when n<50)					13.76
354												
355	**Lognormal GOF Test**											
356				Shapiro Wilk Test Statistic		0.923	**Shapiro Wilk Lognormal GOF Test**					
357				5% Shapiro Wilk P Value		0	Data Not Lognormal at 5% Significance Level					
358				Lilliefors Test Statistic		0.13	**Lilliefors Lognormal GOF Test**					
359				5% Lilliefors Critical Value		0.0595	Data Not Lognormal at 5% Significance Level					
360	**Data Not Lognormal at 5% Significance Level**											
361												
362	**Lognormal Statistics**											
363				Minimum of Logged Data		0.693	Mean of logged Data					2.286
364				Maximum of Logged Data		5.704	SD of logged Data					0.611
365												
366	**Assuming Lognormal Distribution**											
367				95% H-UCL		12.8	90% Chebyshev (MVUE) UCL					13.42
368				95% Chebyshev (MVUE) UCL		14.13	97.5% Chebyshev (MVUE) UCL					15.12
369				99% Chebyshev (MVUE) UCL		17.06						
370												
371	**Nonparametric Distribution Free UCL Statistics**											
372	**Data do not follow a Discernible Distribution (0.05)**											
373												
374	**Nonparametric Distribution Free UCLs**											
375				95% CLT UCL		14.97	95% Jackknife UCL					14.98
376				95% Standard Bootstrap UCL		14.96	95% Bootstrap-t UCL					18.41
377				95% Hall's Bootstrap UCL		23.94	95% Percentile Bootstrap UCL					15.42
378				95% BCA Bootstrap UCL		17.34						

379			90% Chebyshev(Mean, Sd) UCL			16.82				95% Chebyshev(Mean, Sd) UCL		18.68
380			97.5% Chebyshev(Mean, Sd) UCL			21.26				99% Chebyshev(Mean, Sd) UCL		26.33
381												
382						**Suggested UCL to Use**						
383			95% Chebyshev (Mean, Sd) UCL			18.68						
384												
385						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
386						Recommendations are based upon data size, data distribution, and skewness.						
387						These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).						
388						However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.						
389												
390												
391	**Tin**											
392												
393						**General Statistics**						
394					Total Number of Observations	217				Number of Distinct Observations		32
395										Number of Missing Observations		9
396					Minimum	5				Mean		25.2
397					Maximum	790				Median		10
398					SD	73.99				Std. Error of Mean		5.023
399					Coefficient of Variation	2.936				Skewness		7.344
400												
401						**Normal GOF Test**						
402					Shapiro Wilk Test Statistic	0.247				**Shapiro Wilk GOF Test**		
403					5% Shapiro Wilk P Value	0				Data Not Normal at 5% Significance Level		
404					Lilliefors Test Statistic	0.42				**Lilliefors GOF Test**		
405					5% Lilliefors Critical Value	0.0606				Data Not Normal at 5% Significance Level		
406						**Data Not Normal at 5% Significance Level**						
407												
408						**Assuming Normal Distribution**						
409						**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**	
410					95% Student's-t UCL	33.5				95% Adjusted-CLT UCL (Chen-1995)		36.14
411										95% Modified-t UCL (Johnson-1978)		33.92
412												
413						**Gamma GOF Test**						
414					A-D Test Statistic	58.29				**Anderson-Darling Gamma GOF Test**		
415					5% A-D Critical Value	0.791				Data Not Gamma Distributed at 5% Significance Level		
416					K-S Test Statistic	0.448				**Kolmogorov-Smirnov Gamma GOF Test**		
417					5% K-S Critical Value	0.0639				Data Not Gamma Distributed at 5% Significance Level		
418						**Data Not Gamma Distributed at 5% Significance Level**						
419												
420						**Gamma Statistics**						
421					k hat (MLE)	0.863				k star (bias corrected MLE)		0.854
422					Theta hat (MLE)	29.2				Theta star (bias corrected MLE)		29.5
423					nu hat (MLE)	374.7				nu star (bias corrected)		370.8
424					MLE Mean (bias corrected)	25.2				MLE Sd (bias corrected)		27.27
425										Approximate Chi Square Value (0.05)		327.2
426					Adjusted Level of Significance	0.0489				Adjusted Chi Square Value		326.9
427												
428						**Assuming Gamma Distribution**						
429					95% Approximate Gamma UCL (use when n>=50))	28.56				95% Adjusted Gamma UCL (use when n<50)		28.59
430												
431						**Lognormal GOF Test**						
432					Shapiro Wilk Test Statistic	0.486				**Shapiro Wilk Lognormal GOF Test**		

433				5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level						
434				Lilliefors Test Statistic	0.433	**Lilliefors Lognormal GOF Test**						
435				5% Lilliefors Critical Value	0.0606	Data Not Lognormal at 5% Significance Level						
436	**Data Not Lognormal at 5% Significance Level**											
437												
438	**Lognormal Statistics**											
439				Minimum of Logged Data	1.609	Mean of logged Data	2.546					
440				Maximum of Logged Data	6.672	SD of logged Data	0.755					
441												
442	**Assuming Lognormal Distribution**											
443				95% H-UCL	18.76	90% Chebyshev (MVUE) UCL	19.87					
444				95% Chebyshev (MVUE) UCL	21.2	97.5% Chebyshev (MVUE) UCL	23.04					
445				99% Chebyshev (MVUE) UCL	26.67							
446												
447	**Nonparametric Distribution Free UCL Statistics**											
448	**Data do not follow a Discernible Distribution (0.05)**											
449												
450	**Nonparametric Distribution Free UCLs**											
451				95% CLT UCL	33.46	95% Jackknife UCL	33.5					
452				95% Standard Bootstrap UCL	33.63	95% Bootstrap-t UCL	40.37					
453				95% Hall's Bootstrap UCL	39.53	95% Percentile Bootstrap UCL	33.99					
454				95% BCA Bootstrap UCL	37.05							
455				90% Chebyshev(Mean, Sd) UCL	40.27	95% Chebyshev(Mean, Sd) UCL	47.1					
456				97.5% Chebyshev(Mean, Sd) UCL	56.57	99% Chebyshev(Mean, Sd) UCL	75.18					
457												
458	**Suggested UCL to Use**											
459				95% Chebyshev (Mean, Sd) UCL	47.1							
460												
461	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
462	Recommendations are based upon data size, data distribution, and skewness.											
463	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
464	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
465												
466												
467	**Zinc**											
468												
469	**General Statistics**											
470				Total Number of Observations	225	Number of Distinct Observations	113					
471						Number of Missing Observations	1					
472				Minimum	5	Mean	668					
473				Maximum	120000	Median	64					
474				SD	8003	Std. Error of Mean	533.5					
475				Coefficient of Variation	11.98	Skewness	14.93					
476												
477	**Normal GOF Test**											
478				Shapiro Wilk Test Statistic	0.078	**Shapiro Wilk GOF Test**						
479				5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level						
480				Lilliefors Test Statistic	0.481	**Lilliefors GOF Test**						
481				5% Lilliefors Critical Value	0.0595	Data Not Normal at 5% Significance Level						
482	**Data Not Normal at 5% Significance Level**											
483												
484	**Assuming Normal Distribution**											
485	**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**						
486				95% Student's-t UCL	1549	95% Adjusted-CLT UCL (Chen-1995)	2113					

487											95% Modified-t UCL (Johnson-1978)	1638
488												
489	**Gamma GOF Test**											
490					A-D Test Statistic	4.444E+28	**Anderson-Darling Gamma GOF Test**					
491					5% A-D Critical Value	0.869	Data Not Gamma Distributed at 5% Significance Level					
492					K-S Test Statistic	0.379	**Kolmogorov-Smirnov Gamma GOF Test**					
493					5% K-S Critical Value	0.066	Data Not Gamma Distributed at 5% Significance Level					
494	**Data Not Gamma Distributed at 5% Significance Level**											
495												
496	**Gamma Statistics**											
497					k hat (MLE)	0.303					k star (bias corrected MLE)	0.302
498					Theta hat (MLE)	2205					Theta star (bias corrected MLE)	2213
499					nu hat (MLE)	136.3					nu star (bias corrected)	135.8
500					MLE Mean (bias corrected)	668					MLE Sd (bias corrected)	1216
501											Approximate Chi Square Value (0.05)	109.9
502					Adjusted Level of Significance	0.0489					Adjusted Chi Square Value	109.8
503												
504	**Assuming Gamma Distribution**											
505					95% Approximate Gamma UCL (use when n>=50))	825.6					95% Adjusted Gamma UCL (use when n<50)	826.7
506												
507	**Lognormal GOF Test**											
508					Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk Lognormal GOF Test**					
509					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
510					Lilliefors Test Statistic	0.117	**Lilliefors Lognormal GOF Test**					
511					5% Lilliefors Critical Value	0.0595	Data Not Lognormal at 5% Significance Level					
512	**Data Not Lognormal at 5% Significance Level**											
513												
514	**Lognormal Statistics**											
515					Minimum of Logged Data	1.609					Mean of logged Data	4.232
516					Maximum of Logged Data	11.7					SD of logged Data	1.097
517												
518	**Assuming Lognormal Distribution**											
519					95% H-UCL	147.9					90% Chebyshev (MVUE) UCL	159.4
520					95% Chebyshev (MVUE) UCL	174.9					97.5% Chebyshev (MVUE) UCL	196.5
521					99% Chebyshev (MVUE) UCL	238.8						
522												
523	**Nonparametric Distribution Free UCL Statistics**											
524	**Data do not follow a Discernible Distribution (0.05)**											
525												
526	**Nonparametric Distribution Free UCLs**											
527					95% CLT UCL	1546					95% Jackknife UCL	1549
528					95% Standard Bootstrap UCL	1535					95% Bootstrap-t UCL	28027
529					95% Hall's Bootstrap UCL	14689					95% Percentile Bootstrap UCL	1731
530					95% BCA Bootstrap UCL	2347						
531					90% Chebyshev(Mean, Sd) UCL	2269					95% Chebyshev(Mean, Sd) UCL	2994
532					97.5% Chebyshev(Mean, Sd) UCL	4000					99% Chebyshev(Mean, Sd) UCL	5977
533												
534	**Suggested UCL to Use**											
535					95% Chebyshev (Mean, Sd) UCL	2994						
536												
537	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
538	Recommendations are based upon data size, data distribution, and skewness.											
539	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
540	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											

541											
542											
543	**TRH >C16-C34**										
544											
545	**General Statistics**										
546				Total Number of Observations		15			Number of Distinct Observations		8
547									Number of Missing Observations		211
548				Minimum		100			Mean		255.3
549				Maximum		970			Median		100
550				SD		280			Std. Error of Mean		72.31
551				Coefficient of Variation		1.097			Skewness		2.005
552											
553	**Normal GOF Test**										
554				Shapiro Wilk Test Statistic		0.626			**Shapiro Wilk GOF Test**		
555				5% Shapiro Wilk Critical Value		0.881			Data Not Normal at 5% Significance Level		
556				Lilliefors Test Statistic		0.326			**Lilliefors GOF Test**		
557				5% Lilliefors Critical Value		0.22			Data Not Normal at 5% Significance Level		
558	**Data Not Normal at 5% Significance Level**										
559											
560	**Assuming Normal Distribution**										
561				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
562				95% Student's-t UCL		382.7			95% Adjusted-CLT UCL (Chen-1995)		414.3
563									95% Modified-t UCL (Johnson-1978)		388.9
564											
565	**Gamma GOF Test**										
566				A-D Test Statistic		1.99			**Anderson-Darling Gamma GOF Test**		
567				5% A-D Critical Value		0.754			Data Not Gamma Distributed at 5% Significance Level		
568				K-S Test Statistic		0.299			**Kolmogorov-Smirnov Gamma GOF Test**		
569				5% K-S Critical Value		0.226			Data Not Gamma Distributed at 5% Significance Level		
570	**Data Not Gamma Distributed at 5% Significance Level**										
571											
572	**Gamma Statistics**										
573				k hat (MLE)		1.47			k star (bias corrected MLE)		1.22
574				Theta hat (MLE)		173.7			Theta star (bias corrected MLE)		209.3
575				nu hat (MLE)		44.09			nu star (bias corrected)		36.6
576				MLE Mean (bias corrected)		255.3			MLE Sd (bias corrected)		231.2
577									Approximate Chi Square Value (0.05)		23.76
578				Adjusted Level of Significance		0.0324			Adjusted Chi Square Value		22.49
579											
580	**Assuming Gamma Distribution**										
581				95% Approximate Gamma UCL (use when n>=50))		393.4			95% Adjusted Gamma UCL (use when n<50)		415.6
582											
583	**Lognormal GOF Test**										
584				Shapiro Wilk Test Statistic		0.733			**Shapiro Wilk Lognormal GOF Test**		
585				5% Shapiro Wilk Critical Value		0.881			Data Not Lognormal at 5% Significance Level		
586				Lilliefors Test Statistic		0.289			**Lilliefors Lognormal GOF Test**		
587				5% Lilliefors Critical Value		0.22			Data Not Lognormal at 5% Significance Level		
588	**Data Not Lognormal at 5% Significance Level**										
589											
590	**Lognormal Statistics**										
591				Minimum of Logged Data		4.605			Mean of logged Data		5.165
592				Maximum of Logged Data		6.877			SD of logged Data		0.808
593											
594	**Assuming Lognormal Distribution**										

595					95% H-UCL	411.9				90% Chebyshev (MVUE) UCL		393.7
596				95% Chebyshev (MVUE) UCL		465.1				97.5% Chebyshev (MVUE) UCL		564.3
597				99% Chebyshev (MVUE) UCL		759						
598												
599						**Nonparametric Distribution Free UCL Statistics**							
600						**Data do not follow a Discernible Distribution (0.05)**							
601												
602						**Nonparametric Distribution Free UCLs**							
603					95% CLT UCL	374.3				95% Jackknife UCL		382.7
604				95% Standard Bootstrap UCL		368.1				95% Bootstrap-t UCL		578.9
605				95% Hall's Bootstrap UCL		848.9				95% Percentile Bootstrap UCL		378.7
606				95% BCA Bootstrap UCL		425.3						
607				90% Chebyshev(Mean, Sd) UCL		472.3				95% Chebyshev(Mean, Sd) UCL		570.5
608				97.5% Chebyshev(Mean, Sd) UCL		706.9				99% Chebyshev(Mean, Sd) UCL		974.8
609												
610						**Suggested UCL to Use**							
611					95% Chebyshev (Mean, Sd) UCL	570.5						
612												
613						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
614						Recommendations are based upon data size, data distribution, and skewness.							
615						These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
616						However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
617												
618												
619	**Benzo(a) pyrene**											
620												
621						**General Statistics**							
622					Total Number of Observations	17				Number of Distinct Observations		3
623										Number of Missing Observations		209
624					Minimum	0.5				Mean		0.571
625					Maximum	1.3				Median		0.5
626					SD	0.211				Std. Error of Mean		0.0513
627					Coefficient of Variation	0.371				Skewness		3.136
628												
629						**Normal GOF Test**						
630					Shapiro Wilk Test Statistic	0.39				**Shapiro Wilk GOF Test**		
631					5% Shapiro Wilk Critical Value	0.892				Data Not Normal at 5% Significance Level		
632					Lilliefors Test Statistic	0.513				**Lilliefors GOF Test**		
633					5% Lilliefors Critical Value	0.207				Data Not Normal at 5% Significance Level		
634						**Data Not Normal at 5% Significance Level**						
635												
636						**Assuming Normal Distribution**						
637						**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**	
638					95% Student's-t UCL	0.66				95% Adjusted-CLT UCL (Chen-1995)		0.697
639										95% Modified-t UCL (Johnson-1978)		0.667
640												
641						**Gamma GOF Test**						
642					A-D Test Statistic	5.132				**Anderson-Darling Gamma GOF Test**		
643					5% A-D Critical Value	0.739				Data Not Gamma Distributed at 5% Significance Level		
644					K-S Test Statistic	0.522				**Kolmogorov-Smirnov Gamma GOF Test**		
645					5% K-S Critical Value	0.209				Data Not Gamma Distributed at 5% Significance Level		
646						**Data Not Gamma Distributed at 5% Significance Level**						
647												
648						**Gamma Statistics**						

649					k hat (MLE)	12.28				k star (bias corrected MLE)		10.15
650					Theta hat (MLE)	0.0465				Theta star (bias corrected MLE)		0.0562
651					nu hat (MLE)	417.4				nu star (bias corrected)		345.1
652					MLE Mean (bias corrected)	0.571				MLE Sd (bias corrected)		0.179
653										Approximate Chi Square Value (0.05)		303.1
654					Adjusted Level of Significance	0.0346				Adjusted Chi Square Value		298.9
655												
656					**Assuming Gamma Distribution**							
657				95% Approximate Gamma UCL (use when n>=50))		0.65				95% Adjusted Gamma UCL (use when n<50)		0.659
658												
659					**Lognormal GOF Test**							
660					Shapiro Wilk Test Statistic	0.398				**Shapiro Wilk Lognormal GOF Test**		
661					5% Shapiro Wilk Critical Value	0.892				Data Not Lognormal at 5% Significance Level		
662					Lilliefors Test Statistic	0.517				**Lilliefors Lognormal GOF Test**		
663					5% Lilliefors Critical Value	0.207				Data Not Lognormal at 5% Significance Level		
664					**Data Not Lognormal at 5% Significance Level**							
665												
666					**Lognormal Statistics**							
667					Minimum of Logged Data	-0.693				Mean of logged Data		-0.602
668					Maximum of Logged Data	0.262				SD of logged Data		0.264
669												
670					**Assuming Lognormal Distribution**							
671					95% H-UCL	0.64				90% Chebyshev (MVUE) UCL		0.676
672					95% Chebyshev (MVUE) UCL	0.725				97.5% Chebyshev (MVUE) UCL		0.795
673					99% Chebyshev (MVUE) UCL	0.93						
674												
675					**Nonparametric Distribution Free UCL Statistics**							
676					**Data do not follow a Discernible Distribution (0.05)**							
677												
678					**Nonparametric Distribution Free UCLs**							
679					95% CLT UCL	0.655				95% Jackknife UCL		0.66
680					95% Standard Bootstrap UCL	N/A				95% Bootstrap-t UCL		N/A
681					95% Hall's Bootstrap UCL	N/A				95% Percentile Bootstrap UCL		N/A
682					95% BCA Bootstrap UCL	N/A						
683					90% Chebyshev(Mean, Sd) UCL	0.724				95% Chebyshev(Mean, Sd) UCL		0.794
684					97.5% Chebyshev(Mean, Sd) UCL	0.891				99% Chebyshev(Mean, Sd) UCL		1.081
685												
686					**Suggested UCL to Use**							
687					95% Student's-t UCL	0.66				or 95% Modified-t UCL		0.667
688												
689	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
690	Recommendations are based upon data size, data distribution, and skewness.											
691	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
692	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
693												

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
54 @ 1.00M	3/07/2017	M17-Jl02202	552701	1.00 M	FILL, sandy CLAY, Rubbish	10	68	6.6	0.6	19	27	2.6	<5	15	<2	0.8	13	110
DUPLICATE 1	3/07/2017	M17-Jl02205	552701	1.00 M	FILL, sandy CLAY, Rubbish	11	72	6.4	<0.4	14	30	1.3	<5	11	<2	0.3	36	92
RPD%						9.52	5.71	3.08	0	30.3	10.53	66.67	0	30.769	0	90.91	93.88	17.82

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
55 @ 0.50M	3/07/2017	M17-Jl02215	552701	0.50 M	FILL, silty SAND	9.3	52	6.5	<0.4	10	16	<0.1	<5	14	<2	<0.2	<10	120
DUPLICATE 2	3/07/2017	M17-Jl02238	552701	0.50 M	FILL, silty SAND	16	8	<2	<0.4	<5	6.3	3.3	<5	<5	<2	<0.2	<10	68
RPD%						52.96	146.7	0	0	0	87.00	0	0	0	0	0	0	55.32

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
52 @ 0.50M	3/07/2017	M17-Jl02275	552701	0.50 M	FILL, sandy CLAY	8.4	23	2.3	<0.4	6.9	6.7	<0.1	<5	<5	<2	0.3	<10	34
DUPLICATE 4	3/07/2017	M17-Jl02267	552701	0.50 M	FILL, sandy CLAY	8.3	13	2.8	<0.4	13	8.4	<0.1	<5	7.8	<2	<0.2	<10	21
RPD%						1.20	55.56	19.61	0	61.31	22.52	0	0	0	0	0	0	47.27

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
56 @ 2.00M	3/07/2017	M17-Jl02308	552701	2.00 M	FILL, silty SAND, Rubbish	11	77	4.4	<0.4	8.7	11	0.1	<5	11	<2	<0.2	<10	100
DUPLICATE 5	3/07/2017	M17-Jl02315	552701	2.00 M	FILL, silty SAND, Rubbish	11	43	4.9	<0.4	8.5	32	<0.1	<5	11	<2	<0.2	<10	73
RPD%						0	56.67	10.75	0	2.33	97.67	0	0	0	0	0	0	31.21

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
57 @ 1.00M	3/07/2017	M17-Jl02283	552701	1.00 M	FILL, silty SAND, Rubbish	11	150	23	<0.4	27	49	0.1	<5	25	<2	1.8	340	140
DUPLICATE 6	3/07/2017	M17-Jl02316	552701	1.00 M	FILL, silty SAND, Rubbish	12	99	13	2	28	97	0.6	<5	23	<2	4.1	320	390
RPD%						8.70	40.96	55.56	0	3.64	65.75	142.9	0	8.3333	0	77.97	6.06	94.33962

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
51 @ 1.50M	3/07/2017	M17-Jl02323	552701	1.50 M	FILL, sandy CLAY	11	53	9.2	<0.4	30	8.8	<0.1	<5	14	<2	<0.2	<10	110
DUPLICATE 7	3/07/2017	M17-Jl02317	552701	1.50 M	FILL, sandy CLAY	9.6	93	7.6	<0.4	23	15	<0.1	<5	13	<2	<0.2	<10	93
RPD%						13.59	54.79	19.05	0	26.42	52.10	0	0	7.41	0	0	0	16.75

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
58 @ 0.50M	3/07/2017	M17-Jl02367	552701	0.50 M	FILL, silty SAND	7.6	77	3.7	<0.4	8.3	20	<0.1	<5	5.9	<2	<0.2	<10	85
DUPLICATE 8	3/07/2017	M17-Jl02346	552701	0.50 M	FILL, silty SAND	8.4	50	5	<0.4	14	21	<0.1	<5	7.7	<2	<0.2	<10	78
RPD%						10	42.52	29.89	0	51.12	4.88	0	0	26.471	0	0	0	8.59

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
54 @ 1.00M	3/07/2017	M17-Jl02202	552701	1.00 M	FILL, sandy CLAY, Rubbish	10	68	6.6	0.6	19	27	2.6	<5	15	<2	0.8	13	110
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish	16.6	58	6	<1	10	58	0.6	4	8	<5	<2	40	105
RPD%						49.62	15.87	9.52	*DDL	62.07	72.94	125	*DDL	60.87	*DDL	*DDL	101.9	4.65

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
55 @ 0.50M	3/07/2017	M17-Jl02215	552701	0.50 M	FILL, silty SAND	9.3	52	6.5	<0.4	10	16	<0.1	<5	14	<2	<0.2	<10	120
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND	9.1	11	<5	<1	5	7	<2	<2	2	<5	<2	<5	28
RPD%						2.17	130.2	*DDL	*DDL	66.67	78.26087	*DDL	*DDL	150	*DDL	*DDL	*DDL	124.3243

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
53 @ 1.00M	3/07/2017	M17-Jl02263	552701	1.00 M	FILL, sandy CLAY, Rubbish	22	74	4.7	1.9	13	48	<0.1	<5	12	<2	23	11	220
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish	29.1	90	5	3	17	53	0.2	2	17	<5	111	<5	391
RPD%						27.79	19.51	6.186	44.9	26.67	9.90	*DDL	*DDL	34.483	*DDL	131.3	*DDL	55.97

						Inorganics	Lead	Metals											
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
52 @ 0.50M	3/07/2017	M17-Jl02275	552701	0.50 M	FILL, sandy CLAY	8.4	23	2.3	<0.4	6.9	6.7	<0.1	<5	<5	<2	0.3	<10	34
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY	8.4	18	<5	<1	14	8	<0.1	<2	13	<5	<2	<5	35
RPD%						0	24.39	*DDL	*DDL	67.94	17.68707	0	*DDL	*DDL	*DDL	*DDL	*DDL	2.90

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
56 @ 2.00M	3/07/2017	M17-Jl02308	552701	2.00 M	FILL, silty SAND, Rubbish	11	77	4.4	<0.4	8.7	11	0.1	<5	11	<2	<0.2	<10	100
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish	10.8	24	<5	<1	6	8	<0.1	<2	5	<5	<2	<5	27
RPD%						1.83	105	*DDL	*DDL	36.73	31.58	*DDL	*DDL	75	*DDL	*DDL	*DDL	114.9606

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
57 @ 1.00M	3/07/2017	M17-Jl02283	552701	1.00 M	FILL, silty SAND, Rubbish	11	150	23	<0.4	27	49	0.1	<5	25	<2	1.8	340	140
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish	9	65	8	1	21	59	0.5	<2	16	<5	4	213	127
RPD%						20	79.07	96.77	*DDL	25	18.52	133.3	*DDL	43.902	*DDL	75.86	45.93	9.74

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
51 @ 1.50M	3/07/2017	M17-Jl02323	552701	1.50 M	FILL, sandy CLAY	11	53	9.2	<0.4	30	8.8	<0.1	<5	14	<2	<0.2	<10	110
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY	11	57	<5	<1	15	10	<0.1	<2	8	<5	<2	<5	52
RPD%						0	7.27	*DDL	*DDL	66.67	12.77	0	*DDL	54.545	*DDL	*DDL	*DDL	71.60

						Inorganics	Lead	Metals										
						Moisture Content (dried @ 103°C)	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	5	2	0.4	2	5	0.1	2	2	2	0.2	5	5
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**													
58 @ 0.50M	3/07/2017	M17-Jl02367	552701	0.50 M	FILL, silty SAND	7.6	77	3.7	<0.4	8.3	20	<0.1	<5	5.9	<2	<0.2	<10	85
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	7.3	41	<5	<1	9	20	0.1	<2	5	<5	<2	<5	56
RPD%						4.03	61.02	*DDL	*DDL	8.09	0	*DDL	*DDL	16.514	*DDL	*DDL	*DDL	41.13

Geoaquitards Environmental				Lead	Metals											TPH
				Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	C6 - C9
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
EQL				0.001	0.001	0.0002	0.001	0.001	0.0001	0.005	0.001	0.001	0.005	0.005	0.005	20
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**													
RINSATE	3/07/2017	M17-Jl02564	552701	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0001	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	-
TRIP	3/07/2017	M17-Jl02565	552701	-	-	-	-	-	-	-	-	-	-	-	-	<20

Appendix H
Laboratory Data Compilation - ASLP
Sandringham Golf Driving Range (20 Wangara Road, Sandringham)

Geoaquitards Environmental				Inorganics	Lead	Metals						PAH/Phenols
				pH (Initial)	Lead	Arsenic	Cadmium	Copper	Nickel	Tin	Zinc	Benzo(a) pyrene
				pH_Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
EQL				0.1	0.01	0.01	0.005	0.01	0.01	0.5	0.01	1
IWRG 621 Table 2 Soil Hazard Categorisation Thresholds – ASLP 1(mg/L)					1	0.7	0.2	200	2		300	1
Field_ID	**SampleCode**	**Lab_Report_Number**	**Sampled_Date-Time**									
48@3.0M	M17-Jl13566	553942	3/07/2017	8.7	0.17	0.02	<0.005	0.03	0.09	<0.5	2.1	-
68@0.5M	M17-Jl13567	553942	3/07/2017	8.2	-	-	-	-	-	-	-	<1
Statistical Summary												
Number of Results				2	1	1	1	1	1	1	1	1
Minimum Concentration				8.2	0.17	0.02	<0.005	0.03	0.09	<0.5	2.1	<1
Maximum Concentration				8.7	0.17	0.02	<0.005	0.03	0.09	<0.5	2.1	<1
Average Concentration												
Median Concentration				8.45	0.17	0.02	0.0025	0.03	0.09	0.25	2.1	0.5
Standard Deviation												
Geometric Standard Deviation				1								

APPENDIX I

LOGS FOR SOIL SAMPLING PROGRAM

Geoaquitards Environmental
Suite 23, 160 South Gippsland Highway
Dandenong South, VIC, 3175
Telephone: 03 9554 3258
Fax: 03 9705 7948

LOCATION NUMBER: 1

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, brown, dry, medium dense, occasional clay pieces and crushed rocks	1 at 0.15m	No odour was detected in the soil samples.
			0.50			1 at 0.50m	
			1.00		crushed rocks throughout	1 at 1.0m	
			1.50		FILL, sandy CLAY, brown mottled grey orange, moist, stiff, occasional crushed rocks and gravel	1 at 1.50m	No odour was detected in the soil samples.
			2.00		FILL, silty SAND, dark grey, moist, medium dense	1 at 2.0m	No odour was detected in the soil samples.
			2.50			1 at 2.50m	
			3.00			1 at 3.0m	
			3.50		Rubbish(Landfill Material) throughout	1 at 3.50m	No odour was detected in the soil samples.
			4.00		Borehole 1 terminated at 4m		
			4.50				

Geoaquitards Environmental
Suite 23, 160 South Gippsland Highway
Dandenong South, VIC, 3175
Telephone: 03 9554 3258
Fax: 03 9705 7948

LOCATION NUMBER: 2

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, brown, dry, medium dense, occasional clay pieces and crushed rocks	2 at 0.15m 2 at 0.50m	No odour was detected in the soil samples.
			1.00		FILL, sandy CLAY, brown mottled grey orange, moist, stiff, occasional crushed rocks and gravel, pieces of rubbish(Landfill Material)	2 at 1.0m	No odour was detected in the soil samples.
			1.50			2 at 1.50m	
			2.00		Borehole 2 terminated at 1.6m		

Geoaquitards Environmental
Suite 23, 160 South Gippsland Highway
Dandenong South, VIC, 3175
Telephone: 03 9554 3258
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LOCATION NUMBER: 3

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, dry, medium dense, occasional clay pieces and crushed rocks	3 at 0.15m	No odour was detected in the soil samples.
			0.50			3 at 0.50m	
			1.00			3 at 1.0m	
					crushed rocks, bricks and rubbish(Landfill Material) throughout		
			1.50			3 at 1.50m	
					Borehole 3 terminated at 1.6m		
			2.00				

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LOCATION NUMBER: 4

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, grey, dry, medium dense, occasional clay pieces and gravel	4 at 0.15m 4 at 0.50m	No odour was detected in the soil samples.
			1.50		sandy CLAY, grey brown, moist/dry, stiff, occasional gravel	4 at 1.0m 4 at 1.50m	No odour was detected in the soil samples.
			2.00		Borehole 4 terminated at 1.6m		

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LOCATION NUMBER: 5

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, gravel throughout		No odour was detected in the soil samples.
					moist	5 at 0.15m	
			0.50			5 at 0.50m	
					rubbish(Landfill Material) throughout		
			1.00			5 at 1.0m	
			1.50			5 at 1.50m	
					Borehole 5 terminated at 1.6m		
			2.00				

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LOCATION NUMBER: 6

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, occasional gravel	6 at 0.15m	No odour was detected in the soil samples.
					gravel throughout		
			0.50			6 at 0.50m	
					moist, dark brown		
			1.00			6 at 1.0m	
			1.50			6 at 1.50m	
					Borehole 6 terminated at 1.6m		
			2.00				

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LOCATION NUMBER: 7

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, occasional gravel		No odour was detected in the soil samples.
						7 at 0.15m	
			0.50		gravel throughout	7 at 0.50m	
					moist, brown		
			1.00			7 at 1.0m	
			1.50			7 at 1.50m	
					Borehole 7 terminated at 1.6m		
			2.00				

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LOCATION NUMBER: 8

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, occasional gravel, occasional clay pieces	8 at 0.15m	No odour was detected in the soil samples.
			0.50			8 at 0.50m	
					gravel throughout		
			1.00			8 at 1.0m	
			1.50			8 at 1.50m	
					Borehole 8 terminated at 1.6m		
			2.00				

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LOCATION NUMBER: 9

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, dry, medium dense, occasional gravel, occasional clay pieces	9 at 0.15m	No odour was detected in the soil samples.
					rubbish(Landfill Material) throughout		
			0.50			9 at 0.50m	
					Borehole 9 terminated at 0.9m		
			1.00				
			1.50				

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LOCATION NUMBER: 10

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, moist, medium dense, occasional gravel	10 at 0.15m	No odour was detected in the soil samples.
					gravel throughout		
			0.50			10 at 0.50m	
			1.00		rubbish(Landfill Material) throughout	10 at 1.0m	
			1.50			10 at 1.50m	
					Borehole 10 terminated at 1.6m		
			2.00				
			2.50				
			3.00				
			3.50				

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LOCATION NUMBER: 11

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 27/02/17 **COMPLETED** 27/02/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, grey, moist, medium dense, occasional gravel	11 at 0.15m 11 at 0.50m	No odour was detected in the soil samples.
			1.00 1.50		FILL, sandy CLAY, grey mottled brown, moist/dry, stiff, gravel throughout	11 at 1.0m 11 at 1.50m	No odour was detected in the soil samples.
			2.00 2.50 3.00 3.50		Borehole 11 terminated at 1.6m		

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LOCATION NUMBER: 12

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, dry, medium dense, occasional gravel	12 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		silty SAND, pale brown, dry/moist, medium dense	12 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			12 at 1.00m 0.0	
			1.50			12 at 1.50m 0.0	
					clayey SAND, pale brown mottled orange brown, moist, medium dense		No odour was detected in the soil samples.
			2.00			12 at 2.00m 0.0	
			2.50			12 at 2.50m 0.0	
					sandy CLAY, brown mottled orange grey, moist, stiff		No odour was detected in the soil samples.
			3.00			12 at 3.00m 0.0	
					Borehole 12 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 13

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, occasional gravel	13 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			13 at 0.50m 0.0	
			1.00			13 at 1.00m 0.0	
			1.50		plastic	13 at 1.50m 0.0	Putrescible odour detected
			2.00		silty SAND, brown, moist, medium dense	13 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50		clayey SAND, pale brown mottled orange, moist, medium dense	13 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			13 at 3.00m 0.0	
			3.50		Borehole 13 terminated at 3.1m		

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LOCATION NUMBER: 14

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey, dry/moist, medium dense, occasional gravel	14 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			14 at 0.50m 0.0	
					FILL, silty SAND/Rubbish(Landfill Material), brown, moist, medium dense, occasional gravel		Putrescible odour detected
			1.00			14 at 1.00m 0.0	
			1.50			14 at 1.50m 0.0	
			2.00			14 at 2.00m 0.0	
					clayey SAND, brown mottled grey orange, moist, medium dense		No odour was detected in the soil samples.
			2.50			14 at 2.50m 0.0	
			3.00			14 at 3.00m 0.0	
					Borehole 14 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 15

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, dry/moist, medium dense, occasional gravel	15 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			15 at 0.50m 0.0	
			1.00			15 at 1.00m 0.0	Putrescible odour detected
			1.50			15 at 1.50m 0.0	
			2.00		clayey SAND, brown mottled grey orange, moist, medium dense	15 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50			15 at 2.50m 0.0	
			3.00			15 at 3.00m 0.0	
					Borehole 15 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 16

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, grey/brown, dry, medium dense	16 at 0.15m 0.0 16 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, pale grey, moist, medium dense	16 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50		FILL, silty SAND, dark grey brown, moist, medium dense	16 at 1.50m 0.0	No odour was detected in the soil samples.
			2.00			16 at 2.00m 0.0	
			2.50		clayey SAND, brown mottled grey orange, moist, medium dense	16 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			16 at 3.00m 0.0	
			3.50		Borehole 16 terminated at 3.1m		

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LOCATION NUMBER: 17

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey, dry/moist, medium dense, occasional gravel	17 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			17 at 0.50m 0.0	
			1.00			17 at 1.00m 0.0	
			1.50			17 at 1.50m 0.0	
			2.00		clayey SAND, brown mottled grey orange, moist, medium dense	17 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50			17 at 2.50m 0.0	
			3.00			17 at 3.00m 0.0	
			3.10		Borehole 17 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 18

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, pale brown, moist, medium dense	18 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			18 at 0.50m 0.0	
			1.00			18 at 1.00m 0.0	
			1.50			18 at 1.50m 0.0	
			2.00			18 at 2.00m 0.0	
					clayey SAND, orange, moist, medium dense		No odour was detected in the soil samples.
			2.50			18 at 2.50m 0.0	
			3.00			18 at 3.00m 0.0	
					Borehole 18 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 19

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, pale brown, moist, medium dense	19 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			19 at 0.50m 0.0	
			1.00			19 at 1.00m 0.0	
			1.50			19 at 1.50m 0.0	
			2.00			19 at 2.00m 0.0	
			2.50			19 at 2.50m 0.0	
					clayey SAND, orange, moist, medium dense		No odour was detected in the soil samples.
			3.00			19 at 3.00m 0.0	
					Borehole 19 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 20

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, dry, medium dense, occasional gravel	20 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			20 at 0.50m 0.0	
			1.00		silty SAND, grey, moist, medium dense	20 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50			20 at 1.50m 0.0	
					clayey SAND, pale brown mottled orange grey, moist, medium dense		No odour was detected in the soil samples.
			2.00			20 at 2.00m 0.0	
			2.50			20 at 2.50m 0.0	
			3.00			20 at 3.00m 0.0	
					Borehole 20 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 21

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, gravel throughout	21 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			21 at 0.50m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			1.00			21 at 1.00m 0.0	
			1.50			21 at 1.50m 0.0	
					clayey SAND, pale brown mottled orange, moist, medium dense		No odour was detected in the soil samples.
			2.00			21 at 2.00m 0.0	
			2.50			21 at 2.50m 0.0	
			3.00			21 at 3.00m 0.0	
					Borehole 21 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 22

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, dry, medium dense, gravel throughout	22 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			22 at 0.50m 0.0	
			1.00			22 at 1.00m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			1.50			22 at 1.50m 0.0	
					clayey SAND, pale brown mottled orange, moist, medium dense		No odour was detected in the soil samples.
			2.00			22 at 2.00m 0.0	
			2.50			22 at 2.50m 0.0	
			3.00			22 at 3.00m 0.0	
					Borehole 22 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 23

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark grey brown, moist, medium dense	23 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			23 at 0.50m 0.0	
			1.00			23 at 1.00m 0.0	
			1.50			23 at 1.50m 0.0	
			2.00			23 at 2.00m 0.0	
					sandy CLAY, brown mottled orange grey, moist, stiff		No odour was detected in the soil samples.
			2.50			23 at 2.50m 0.0	
					clayey SAND, orange mottled brown, moist, medium dense		No odour was detected in the soil samples.
			3.00			23 at 3.00m 0.0	
					Borehole 23 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 24

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, dry, medium dense	24 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			24 at 0.50m 0.0	
					FILL, silty SAND, grey brown, moist, medium dense, gravel/cobble throughout		No odour was detected in the soil samples.
			1.00			24 at 1.00m 0.0	
			1.50			24 at 1.50m 0.0	
			2.00			24 at 2.00m 0.0	
			2.50			24 at 2.50m 0.0	
			3.00			24 at 3.00m 0.0	
					Borehole 24 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 25

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, dry/moist, medium dense, occasional gravel	25 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			25 at 0.50m 0.0	
			1.00			25 at 1.00m 0.0	
			1.50			25 at 1.50m 0.0	
					clayey SAND, brown mottled orange brown, moist/dry, medium dense		No odour was detected in the soil samples.
			2.00			25 at 2.00m 0.0	
			2.50			25 at 2.50m 0.0	
			3.00			25 at 3.00m 0.0	
					Borehole 25 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 26

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, brown, moist, medium dense	26 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			26 at 0.50m 0.0	
			1.00		FILL, silty SAND, dark grey brown, moist, medium dense	26 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50			26 at 1.50m 0.0	
			2.00			26 at 2.00m 0.0	
			2.50			26 at 2.50m 0.0	
			3.00			26 at 3.00m 0.0	
			3.10		Borehole 26 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 27

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, moist, medium dense	27 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			27 at 0.50m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			1.00			27 at 1.00m 0.0	
			1.50			27 at 1.50m 0.0	
			2.00			27 at 2.00m 0.0	
			2.50			27 at 2.50m 0.0	
			3.00			27 at 3.00m 0.0	
					Borehole 27 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 28

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense, crushed rocks throughout, occasional glass pieces	28 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			28 at 0.50m 0.0	
			1.00			28 at 1.00m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			1.50			28 at 1.50m 0.0	
					clayey SAND, grey mottled orange, moist, medium dense		No odour was detected in the soil samples.
			2.00			28 at 2.00m 0.0	
			2.50			28 at 2.50m 0.0	
					sandy CLAY, grey mottled orange, moist, stiff		No odour was detected in the soil samples.
			3.00			28 at 3.00m 0.0	
					Borehole 28 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 29

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	29 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			29 at 0.50m 0.0	
			1.00			29 at 1.00m 0.0	
			1.50			29 at 1.50m 0.0	
			2.00		rubbish(Landfill Material) throughout	29 at 2.00m 0.0	Putrescible odour detected
			2.50			29 at 2.50m 0.0	
					Borehole 29 terminated at 2.7m		
			3.00				
			3.50				

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LOCATION NUMBER: 30

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	30 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			30 at 0.50m 0.0	
			1.00			30 at 1.00m 0.0	
			1.50			30 at 1.50m 0.0	
					FILL, Rubbish(Landfill Material), silty SAND, grey brown, moist, medium dense		Putrescible odour detected
			2.00			30 at 2.00m 0.1	
			2.50			30 at 2.50m 0.1	
			3.00			30 at 3.00m 0.0	
					Borehole 30 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 31

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	31 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, silty CLAY, brown mottled orange grey, moist, stiff	31 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			31 at 1.00m 0.0	
			1.50			31 at 1.50m 0.0	
					FILL, Rubbish(Landfill Material), silty CLAY, brown mottled orange grey, moist, stiff		Putrescible odour detected
			2.00			31 at 2.00m 0.0	
			2.50			31 at 2.50m 0.0	
			3.00			31 at 3.00m 0.3	
					Borehole 31 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 32

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, dark grey brown, moist, medium dense	32 at 0.15m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense	32 at 0.50m 0.0	No odour was detected in the soil samples.
			1.50			32 at 1.00m 0.2	Putrescible odour detected
			2.00			32 at 1.50m 0.7	
			2.50			32 at 2.00m 0.2	
			3.00			32 at 2.50m 0.2	
						32 at 3.00m 0.2	
			3.50		Borehole 32 terminated at 3.1m		

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LOCATION NUMBER: 33

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	33 at 0.15m 0.1	No odour was detected in the soil samples.
			0.50			33 at 0.50m 0.2	
			1.00			33 at 1.00m 0.1	
					FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense		Putrescible odour detected
			1.50			33 at 1.50m 0.0	
			2.00			33 at 2.00m 0.0	
			2.50			33 at 2.50m 0.1	
			3.00			33 at 3.00m 0.1	
					Borehole 33 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 34

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, dark grey brown, moist, medium dense	34 at 0.15m 0.0 34 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			34 at 1.00m 0.0	
			1.50			34 at 1.50m 0.0	
			2.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	34 at 2.00m 0.0	Putrescible odour detected
			2.50			34 at 2.50m 0.0	
			3.00			34 at 3.00m 0.0	
			3.50		Borehole 34 terminated at 3.1m		

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LOCATION NUMBER: 35

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark grey brown, moist, medium dense	35 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			35 at 0.50m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			1.00			35 at 1.00m 0.0	
			1.50			35 at 1.50m 0.0	
					silty SAND, dark brown, moist, medium dense		No odour was detected in the soil samples.
			2.00			35 at 2.00m 0.0	
			2.50			35 at 2.50m 0.0	
			3.00			35 at 3.00m 0.0	
					Borehole 35 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 36

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense, crushed rocks throughout, occasional glass pieces	36 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			36 at 0.50m 0.0	
			1.00			36 at 1.00m 0.0	
			1.50			36 at 1.50m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			2.00			36 at 2.00m 0.0	
					clayey SAND, grey mottled orange, moist, medium dense		No odour was detected in the soil samples.
			2.50			36 at 2.50m 0.0	
					sandy CLAY, grey mottled orange, moist, stiff		No odour was detected in the soil samples.
			3.00			36 at 3.00m 0.0	
					Borehole 36 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 37

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	37 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled grey, moist, stiff	37 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, grey brown, moist, medium dense	37 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50			37 at 1.50m 0.0	Putrescible odour detected
			2.00			37 at 2.00m 0.0	
			2.50			37 at 2.50m 0.0	
			3.00			37 at 3.00m 0.0	
					Borehole 37 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 38

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	38 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff	38 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	38 at 1.00m 0.0	Putrescible odour detected
			1.50			38 at 1.50m 0.0	
			2.00		Borehole 38 terminated at 1.8m		

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LOCATION NUMBER: 39

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark grey brown, moist, medium dense	39 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			39 at 0.50m 0.1	
			1.00			39 at 1.00m 0.2	Putrescible odour detected
			1.50			39 at 1.50m 0.1	
			2.00			39 at 2.00m 0.7	
			2.50			39 at 2.50m 0.5	
			3.00			39 at 3.00m 0.0	
					Borehole 39 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 40

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, dark grey brown, moist, medium dense	40 at 0.15m 0.0 40 at 0.50m 0.1	No odour was detected in the soil samples.
			1.00			40 at 1.00m 0.1	
			1.50		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	40 at 1.50m 1.4	Putrescible odour detected
			2.00			40 at 2.00m 0.3	
			2.50			40 at 2.50m 1.2	
			3.00			40 at 3.00m 1.4	
			3.50		Borehole 40 terminated at 3.1m		

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LOCATION NUMBER: 41

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	41 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			41 at 0.50m 0.0	
			1.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	41 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50			41 at 1.50m 0.0	Putrescible odour detected
			2.00			41 at 2.00m 0.0	
			2.50			41 at 2.50m 0.0	
			3.00			41 at 3.00m 0.0	
			3.10		Borehole 41 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 42

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark brown, moist, medium dense	42 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			42 at 0.50m 0.0	
			1.00		silty SAND, dark grey brown, moist, medium dense	42 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50			42 at 1.50m 0.0	
					silty SAND, dark brown, moist, medium dense		No odour was detected in the soil samples.
			2.00			42 at 2.00m 0.0	
			2.50			42 at 2.50m 0.0	
			3.00			42 at 3.00m 0.0	
					Borehole 42 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 43

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense, crushed rocks throughout, occasional glass pieces	43 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			43 at 0.50m 0.0	
			1.00			43 at 1.00m 0.0	
			1.50		dry	43 at 1.50m 0.0	
			2.00			43 at 2.00m 0.0	
			2.50			43 at 2.50m 0.0	
			3.00			43 at 3.00m 0.0	
					Borehole 43 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 44

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	44 at 0.15m 0.0	No odour was detected in the soil samples.
					FILL, sandy CLAY, brown mottled grey, moist, stiff		No odour was detected in the soil samples.
			0.50			44 at 0.50m 0.0	
			1.00			44 at 1.00m 0.0	Putrescible odour detected
					FILL, silty SAND, brown grey moist, medium dense		No odour was detected in the soil samples.
			1.50			44 at 1.50m 0.0	
			2.00			44 at 2.00m 0.0	
					Borehole 44 terminated at 2.1m		
			2.50				
			3.00				
			3.50				

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LOCATION NUMBER: 45

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey brown, moist, medium dense, occasional layers of clay	45 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			45 at 0.50m 0.0	
			1.00			45 at 1.00m 0.0	
			1.50		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	45 at 1.50m 0.0	Putrescible odour detected
			2.00			45 at 2.00m 0.0	
			2.50			45 at 2.50m 0.0	
			3.00			45 at 3.00m 0.3	
			3.50		Borehole 45 terminated at 3.1m		

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LOCATION NUMBER: 46

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, grey brown, moist, medium dense	46 at 0.15m 0.0	No odour was detected in the soil samples.
					FILL, sandy CLAY, brown mottled orange grey, moist, stiff	46 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	46 at 1.00m 0.1	No odour was detected in the soil samples.
			1.50			46 at 1.50m 0.0	Putrescible odour detected
			2.00			46 at 2.00m 0.1	
			2.50			46 at 2.50m 0.1	
			3.00			46 at 3.00m 0.0	
			3.50		Borehole 46 terminated at 3.1m		

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LOCATION NUMBER: 47

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark grey brown, moist, medium dense	47 at 0.15m 0.7	No odour was detected in the soil samples.
			0.50			47 at 0.50m 0.5	
			1.00			47 at 1.00m 0.4	Putrescible odour detected
			1.50			47 at 1.50m 1.5	
			2.00			47 at 2.00m 2.3	
			2.50			47 at 2.50m 2.7	
			3.00			47 at 3.00m 1.0	
					Borehole 47 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 48

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, brown, moist, medium dense	48 at 0.15m 0.0 48 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			48 at 1.00m 0.0	
			1.50		FILL, silty SAND, dark grey brown, moist, medium dense, plastic, rubbish(Landfill Material)	48 at 1.50m 0.0	No odour was detected in the soil samples.
			2.00			48 at 2.00m 0.0	
			2.50		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, very moist - wet, medium dense, plastic	48 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			48 at 3.00m 0.0	
			3.50		Borehole 48 terminated at 3.1m		

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LOCATION NUMBER: 49

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	49 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			49 at 0.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic		No odour was detected in the soil samples.
			1.00			49 at 1.00m 0.0	
							Putrescible odour detected
			1.50			49 at 1.50m 0.0	
			2.00			49 at 2.00m 0.0	
			2.50			49 at 2.50m 0.0	
			3.00			49 at 3.00m 0.0	
			3.10		Borehole 49 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 50

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark brown grey, dry, medium dense	50 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			50 at 0.50m 0.0	
			1.00			50 at 1.00m 0.0	
					silty SAND, brown, dry, medium dense		No odour was detected in the soil samples.
			1.50			50 at 1.50m 0.0	
			2.00			50 at 2.00m 0.0	
					sandy CLAY, pale brown/orange, moist, stiff		No odour was detected in the soil samples.
			2.50			50 at 2.50m 0.0	
			3.00			50 at 3.00m 0.0	
					Borehole 50 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 51

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, grey brown, moist, medium dense, occasional glass pieces	51 at 0.15m 0.0 51 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			51 at 1.00m 0.0	
			1.50		FILL, sandy CLAY, orange brown, dry/moist, very stiff, occasional gravel, occasional metals and ballast	51 at 1.50m 0.0 Duplicate 7 Split 7	No odour was detected in the soil samples.
			2.00		FILL, clayey SAND, grey brown, moist, medium dense, occasional metals and plastic	51 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50		FILL, clayey SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	51 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			51 at 3.00m 0.0	
			3.50		Borehole 51 terminated at 3.1m		

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LOCATION NUMBER: 52

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	52 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff, occasional glass pieces	52 at 0.50m 0.0 Duplicate 4 Split 4	No odour was detected in the soil samples.
			1.00			52 at 1.00m 0.0	Putrescible odour detected
			1.50			52 at 1.50m 0.0	
			2.00			52 at 2.00m 0.0	
			2.50			52 at 2.50m 0.0	
			3.00			52 at 3.00m 0.0	
					Borehole 52 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 53

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	53 at 0.15m 0.4	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff	53 at 0.50m 0.1	No odour was detected in the soil samples.
			1.00		FILL, sandy CLAY, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	53 at 1.00m 0.3 Duplicate 3 Split 3	No odour was detected in the soil samples. Putrescible odour detected
			1.50			53 at 1.50m 0.0	
			2.00		Borehole 53 terminated at 1.9m		
			2.50				
			3.00				
			3.50				

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LOCATION NUMBER: 54

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	54 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff	54 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			54 at 1.00m 0.1 Duplicate 1 Split 1	
					FILL, sandy CLAY, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic, metals		Putrescible odour detected
			1.50			54 at 1.50m 0.6	
			2.00			54 at 2.00m 0.3	
			2.50			54 at 2.50m 0.2	
			3.00			54 at 3.00m 0.4	
					Borehole 54 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 55

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	55 at 0.15m 1.0	No odour was detected in the soil samples.
			0.50			55 at 0.50m 0.5 Duplicate 2 Split 2	
			1.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	55 at 1.00m 0.4	No odour was detected in the soil samples. Putrescible odour detected
			1.50			55 at 1.50m 0.6	
			2.00			55 at 2.00m 0.8	
			2.50			55 at 2.50m 0.1	
			3.00			55 at 3.00m 3.6	
			3.50		Borehole 55 terminated at 3.1m		

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LOCATION NUMBER: 56

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	56 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			56 at 0.50m 0.0	
			1.00			56 at 1.00m 0.0	
			1.50			56 at 1.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense-loose, plastic		Putrescible odour detected
			2.00			56 at 2.00m 0.0 Duplicate 5 Split 5	
			2.50			56 at 2.50m 0.0	
			3.00			56 at 3.00m 0.0	
					Borehole 56 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 57

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, dark grey brown, moist, medium dense	57 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			57 at 0.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic		No odour was detected in the soil samples.
			1.00			57 at 1.00m 0.0 Duplicate 6 Split 6	Putrescible odour detected
			1.50			57 at 1.50m 0.0	
			2.00			57 at 2.00m 0.0	
			2.50			57 at 2.50m 0.0	
			3.00			57 at 3.00m 0.0	
					Borehole 57 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 58

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, bricks, rubble throughout	58 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			58 at 0.50m 0.0 Duplicate 8 Split 8	
			1.00			58 at 1.00m 0.0	
			1.50			58 at 1.50m 0.0	
			2.00			58 at 2.00m 0.0	
					silty SAND, grey brown, very moist, medium dense		No odour was detected in the soil samples.
			2.50			58 at 2.50m 0.0	
			3.00			58 at 3.00m 0.0	
					Borehole 58 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 59

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey brown, moist, medium dense, glass pieces, occasional clay pieces	59 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			59 at 0.50m 0.0	
			1.00			59 at 1.00m 0.0	
			1.50			59 at 1.50m 0.0	
			2.00			59 at 2.00m 0.0	
			2.50		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	59 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			59 at 3.00m 0.0	
			3.10		Borehole 59 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 60

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	60 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff	60 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			60 at 1.00m 0.0	
			1.50			60 at 1.50m 0.0	
			2.00			60 at 2.00m 0.0	
			2.50			60 at 2.50m 0.1	
					FILL, sandy CLAY, Rubbish(Landfill Material), grey brown, moist, medium dense, plastic		Putrescible odour detected
			3.00			60 at 3.00m 0.0	
					Borehole 60 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 61

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense		No odour was detected in the soil samples.
					FILL, sandy CLAY, brown mottled orange grey, moist, stiff	61 at 0.15m 0.1	No odour was detected in the soil samples.
			0.50			61 at 0.50m 0.0	
					FILL, sandy CLAY, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic		No odour was detected in the soil samples.
			1.00			61 at 1.00m 0.2	
							Putrescible odour detected
			1.50			61 at 1.50m 0.0	
			2.00			61 at 2.00m 2.3	
			2.50			61 at 2.50m 1.2	
			3.00			61 at 3.00m 0.9	
					Borehole 61 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 62

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, grey brown, moist, medium dense	62 at 0.15m 0.2	No odour was detected in the soil samples.
			1.00		FILL, sandy CLAY, brown mottled orange grey, moist, stiff	62 at 0.50m 0.0 62 at 1.00m 0.1 62 at 1.50m 0.0	No odour was detected in the soil samples.
					FILL, sandy CLAY, Rubbish(Landfill Material), plastic		Putrescible odour detected
			2.00		Borehole 62 terminated at 1.8m		
			2.50				
			3.00				
			3.50				

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LOCATION NUMBER: 63

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	63 at 0.15m 0.1	No odour was detected in the soil samples.
			0.50			63 at 0.50m 0.4	
			1.00			63 at 1.00m 0.9	
			1.50			63 at 1.50m 0.9	
			2.00			63 at 2.00m 1.5	
			2.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense - loose, plastic		Putrescible odour detected
			2.50			63 at 2.50m 0.8	
			3.00			63 at 3.00m 0.4	
			3.10		Borehole 63 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 64

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PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, dark grey brown, moist, medium dense	64 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			64 at 0.50m 0.0	
			1.00			64 at 1.00m 0.0	
			1.50			64 at 1.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense-loose, plastic		Putrescible odour detected
			2.00			64 at 2.00m 0.2	
			2.50			64 at 2.50m 0.0	
			3.00			64 at 3.00m 0.0	
					Borehole 64 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 65

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, moist, medium dense	65 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, orange, moist, stiff	65 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	65 at 1.00m 0.0	Putrescible odour detected
			1.50			65 at 1.50m 0.0	
			2.00			65 at 2.00m 0.0	
			2.50			65 at 2.50m 0.0	
			3.00			65 at 3.00m 0.0	
			3.50		Borehole 65 terminated at 3.1m		

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LOCATION NUMBER: 66

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PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, bricks, rubble throughout	66 at 0.15m 0.0 66 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			66 at 1.00m 0.0	
			1.50			66 at 1.50m 0.0	
			2.00		FILL, silty sandy CLAY, brown, mottler grey orange, moist, stiff	66 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50		FILL, silty SAND, dark grey brown, moist, medium dense	66 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			66 at 3.00m 0.0	
			3.50		Borehole 66 terminated at 3.1m		

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LOCATION NUMBER: 67

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	67 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			67 at 0.50m 0.0	
			1.00			67 at 1.00m 0.0	
					FILL, sandy CLAY, brown mottled orange grey, moist, stiff		Putrescible odour detected
			1.50			67 at 1.50m 0.0	
			2.00			67 at 2.00m 0.0	
			2.50			67 at 2.50m 0.0	
			3.00			67 at 3.00m 0.0	
					Borehole 67 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 68

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	68 at 0.15m 0.1	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff	68 at 0.50m 0.1	No odour was detected in the soil samples.
			1.00			68 at 1.00m 0.1	
			1.50			68 at 1.50m 0.1	
			2.00			68 at 2.00m 0.1	
					FILL, sandy CLAY, Rubbish(Landfill Material), plastic		Putrescible odour detected
					Borehole 68 terminated at 2.2m		
			2.50				
			3.00				
			3.50				

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LOCATION NUMBER: 69

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, dark grey brown, moist, medium dense	69 at 0.15m 0.0	No odour was detected in the soil samples.
			1.00			69 at 0.50m 0.0	
			1.50		FILL, silty SAND, dark grey brown, moist, medium dense	69 at 1.00m 0.0	No odour was detected in the soil samples.
			2.00		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense-loose, plastic	69 at 1.50m 0.0	Putrescible odour detected
			2.50			69 at 2.00m 0.0	
			3.00			69 at 2.50m 0.0	
			3.50		Borehole 69 terminated at 3.1m	69 at 3.00m 0.0	

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LOCATION NUMBER: 70

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey brown, moist, medium dense, glass pieces, occasional clay pieces	70 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			70 at 0.50m 0.0	
			1.00			70 at 1.00m 0.0	
			1.50			70 at 1.50m 0.0	
			2.00			70 at 2.00m 0.0	
			2.50		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	70 at 2.50m 0.0	No odour was detected in the soil samples.
			3.00			70 at 3.00m 0.0	
			3.10		Borehole 70 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 71

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, moist, medium dense, occasional clay pieces, occasional bricks, gravel throughout	71 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			71 at 0.50m 0.0	
			1.00			71 at 1.00m 0.0	
			1.50			71 at 1.50m 0.0	
			2.00			71 at 2.00m 0.0	
			2.50			71 at 2.50m 0.0	
					bluestone boulders Borehole 71 terminated at 2.6m		
			3.00				
			3.50				

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LOCATION NUMBER: 72

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense, crushed rocks throughout	72 at 0.15m 0.2	No odour was detected in the soil samples.
			0.50			72 at 0.50m 0.1	
			1.00			72 at 1.00m 0.0	Putrescible odour detected
			1.50		ballast		
					Borehole 72 terminated at 1.6m		
			2.00				
			2.50				
			3.00				
			3.50				

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LOCATION NUMBER: 73

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey brown, moist, medium dense	73 at 0.15m 0.2	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, brown mottled orange grey, moist, stiff, occasional sandy lenses	73 at 0.50m 0.2	No odour was detected in the soil samples.
			1.00			73 at 1.00m 0.3	Putrescible odour detected
			1.50			73 at 1.50m 0.1	
			2.00			73 at 2.00m 0.4	
			2.50			73 at 2.50m 0.1	
			3.00			73 at 3.00m 0.2	
					Borehole 73 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 74

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, moist, medium dense	74 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, clayey SAND, brown, moist, stiff	74 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			74 at 1.00m 0.0	
					FILL, silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			1.50			74 at 1.50m 0.1	
					FILL, sandy CLAY, brown, moist, stiff		Putrescible odour detected
			2.00			74 at 2.00m 0.2	
			2.50			74 at 2.50m 0.4	
			3.00			74 at 3.00m 0.1	
					Borehole 74 terminated at 3.1m		
			3.50				

Geoaquitards Environmental
Suite 23, 160 South Gippsland Highway
Dandenong South, VIC, 3175
Telephone: 03 9554 3258
Fax: 03 9705 7948

LOCATION NUMBER: 75

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, moist, medium dense	75 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, orange, moist, stiff	75 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00		FILL, silty SAND, grey, moist, medium dense	75 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50		FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic	75 at 1.50m 0.0	Putrescible odour detected
			2.00			75 at 2.00m 0.0	
			2.50			75 at 2.50m 0.0	
			3.00			75 at 3.00m 0.0	
			3.50		Borehole 75 terminated at 3.1m		

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LOCATION NUMBER: 76

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, grey, moist, medium dense	76 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50		FILL, sandy CLAY, orange, moist, stiff	76 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			76 at 1.00m 0.0	
			1.50			76 at 1.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), dark grey brown, moist, medium dense, plastic		Putrescible odour detected
			2.00			76 at 2.00m 0.0	
			2.50			76 at 2.50m 0.0	
			3.00			76 at 3.00m 0.0	
					Borehole 76 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 77

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PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, brown, dry, medium dense	77 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			77 at 0.50m 0.0	
			1.00		FILL, silty SAND, Rubbish(Landfill Material), brown, moist, medium dense, plastic	77 at 1.00m 0.0	No odour was detected in the soil samples.
			1.50			77 at 1.50m 0.0	
			2.00			77 at 2.00m 0.0	
			2.50			77 at 2.50m 0.0	
			3.00			77 at 3.00m 0.0	
			3.50		Borehole 77 terminated at 3.1m		

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Fax: 03 9705 7948

LOCATION NUMBER: 78

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey, moist, medium dense, occasional clay pieces, occasional bricks, gravel throughout	78 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			78 at 0.50m 0.0	
			1.00			78 at 1.00m 0.0	
			1.50			78 at 1.50m 0.0	
			2.00				
			2.50		bluestone boulders Borehole 78 terminated at 2.2m		
			3.00				
			3.50				

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LOCATION NUMBER: 79

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PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, grey, moist, medium dense, occasional clay pieces, occasional bricks, gravel throughout	79 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			79 at 0.50m 0.0	
			1.00			79 at 1.00m 0.0	
			1.50			79 at 1.50m 0.0	
			2.00		FILL, silty SAND, Rubbish(Landfill Material), brown, moist, medium dense, plastic	79 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50			79 at 2.50m 0.0	
			3.00			79 at 3.00m 0.0	
			3.50		Borehole 79 terminated at 3.1m		

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LOCATION NUMBER: 80

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PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, dry, medium dense, occasional crushed rocks, gravel and clay lenses	80 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			80 at 0.50m 0.0	
			1.00			80 at 1.00m 0.0	
			1.50			80 at 1.50m 0.0	
			2.00			80 at 2.00m 0.0	
			2.50			80 at 2.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), brown, moist, medium dense, plastic		No odour was detected in the soil samples.
			3.00			80 at 3.00m 0.0	
					Borehole 80 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 81

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PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown, dry, medium dense, occasional crushed rocks, gravel and clay lenses	81 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			81 at 0.50m 0.0	
			1.00			81 at 1.00m 0.0	
			1.50			81 at 1.50m 0.0	
			2.00			81 at 2.00m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), brown, moist, medium dense, plastic		No odour was detected in the soil samples.
			2.50			81 at 2.50m 0.0	
			3.00			81 at 3.00m 0.0	
					Borehole 81 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 82

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.50		FILL, silty SAND, brown, dry, medium dense, occasional crushed rocks, gravel and clay lenses	82 at 0.15m 0.0 82 at 0.50m 0.0	No odour was detected in the soil samples.
			1.00			82 at 1.00m 0.0	
			1.50			82 at 1.50m 0.0	
			2.00		FILL, silty SAND, Rubbish(Landfill Material), brown, moist, medium dense, plastic	82 at 2.00m 0.0	No odour was detected in the soil samples.
			2.50			82 at 2.50m 0.0	
			3.00			82 at 3.00m 0.0	
			3.50		Borehole 82 terminated at 3.1m		

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LOCATION NUMBER: 83

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD			0.00		FILL, silty SAND, brown, dry, medium dense, occasional gravel and clay lenses	83 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			83 at 0.50m 0.0	
			1.00			83 at 1.00m 0.0	
			1.50			83 at 1.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), brown, moist, medium dense, plastic		No odour was detected in the soil samples.
			2.00			83 at 2.00m 0.0	
			2.50			83 at 2.50m 0.0	
			3.00			83 at 3.00m 0.0	
			3.10		Borehole 83 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 84

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown/grey, dry, medium dense	84 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			84 at 0.50m 0.0	
			1.00			84 at 1.00m 0.0	
			1.50			84 at 1.50m 0.0	
					FILL, silty SAND, Rubbish(Landfill Material), grey brown, dry, medium dense, plastic		No odour was detected in the soil samples.
			2.00			84 at 2.00m 0.0	
			2.50			84 at 2.50m 0.0	
					silty SAND, brown, moist, medium dense		No odour was detected in the soil samples.
			3.00			84 at 3.00m 0.0	
					Borehole 84 terminated at 3.1m		
			3.50				

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LOCATION NUMBER: 85

CLIENT Bayside City Council **PROJECT NAME** Environmental Due Diligence Report

PROJECT NUMBER RM406-M.1 **PROJECT LOCATION** Sandringham Golf Driving Range (20 Wangara Road, S

DATE STARTED 03/07/17 **COMPLETED** 03/07/17 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR Civiltest Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Mechanical Auger Drilling **HOLE LOCATION**

HOLE SIZE **LOGGED BY** EE **CHECKED BY** EE

NOTES

Method	Water	RL (mAHD)	Depth (m)	Graphic Log	Material Description	Sample Numbers PID Values (ppm)	Additional Observations
AD					FILL, silty SAND, brown/grey, dry, medium dense	85 at 0.15m 0.0	No odour was detected in the soil samples.
			0.50			85 at 0.50m 0.0	
			1.00			85 at 1.00m 0.0	
			1.50			85 at 1.50m 0.0	
					FILL, silty sandy CLAY, orange brown, moist, stiff		No odour was detected in the soil samples.
			2.00			85 at 2.00m 0.0	
			2.50			85 at 2.50m 0.0	
					FILL, silty SAND, grey, dry, medium dense		No odour was detected in the soil samples.
			3.00			85 at 3.00m 0.0	
					Borehole 85 terminated at 3.1m		
			3.50				

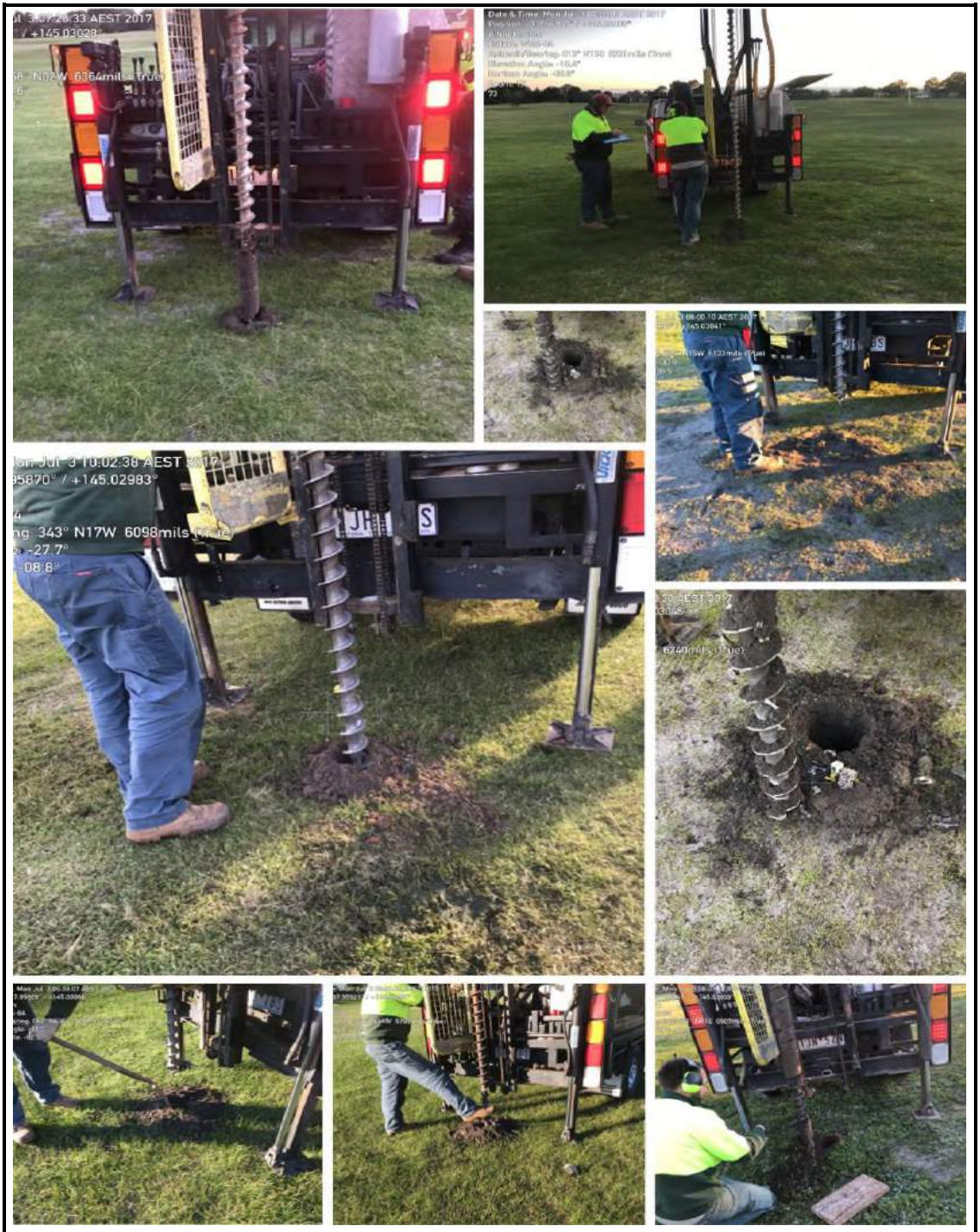
APPENDIX J

SOIL SAMPLING TEST LOCATIONS AND TEST LOCATION PHOTOGRAPHS

FIGURE 8 - SOIL SAMPLING TEST LOCATIONS


Test Locations 1 - 11
(Undertaken on 27/02/2017)
Test Locations 12 - 85
(Undertaken on 3/07/2017)
Wangara Rd
Forrest Ct
Balmoral Ave
Spring St
George St
Talinga Rd
Google earth
Image © 2016 DigitalGlobe
N
100 m

FIGURE 9 - TEST LOCATION PHOTOGRAPHS



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	Description	Site Photographs
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Photograph Date	3 July 2017
Data	19 July 2017	Project	Environmental Due Diligence

APPENDIX K

EQUIPMENT CALIBRATION RECORD

PID Calibration Certificate

Instrument PhoCheck Tiger
Serial No. T-111112

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	**Low**	**High**	**TWA**	**STEL**
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		97ppm Isobutylene	NIST	ME358		97ppm

Calibrated by: Hans Huysmans

Calibration date: 29/06/2017

Next calibration due: 26/12/2017

APPENDIX L

HISTORICAL INFORMATION PROVIDED BY THE COUNCIL



DECEMBER 2016

GeoTech - contamination assessment



JANUARY 1981



Bayside City Council

This map contains VicMap information. Department of Environment, Land, Water & Planning 2016.
Disclaimer:
This material may be of assistance to you but the state of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or consequences which may arise from your relying on any information contained in this material. Using or copying parts of this document is prohibited without Councils written authority.

1970 Showing Battery Factory

16/01/2017

Scale 1:4514

Printed by Graeme Barnes

City of Sandringham

ALL COMMUNICATIONS TO BE
ADDRESSED TO THE TOWN CLERK
P.O. BOX 27, SANDRINGHAM, 3191
TELEPHONE: 598 8111
ENQUIRIES TO:

Mr G Dummett
TPO:TB:191

Municipal Offices,
Royal Avenue,
Sandringham, 3191

Dear Sir

26th March 1986

ESTABLISHMENT OF GOLF DRIVING RANGE
OLD TIP SITE, WANGARA ROAD RESERVE, SANDRINGHAM

The Council of the City of Sandringham supports the application by Eight Days per Week Pty Ltd to establish a Golf Driving Range on the above Council owned land as lessee to the Council.

The 3.3 ha of vacant land is reserved for Proposed Public Open Space under the Melbourne Metropolitan Planning Scheme. It adjoins the Cheltenham Cemetery and is opposite factories in a General Industrial Zone and the Sandringham green belt reserve.

The land was used as a Municipal Garbage Tip until 1968.

The proposal entails the construction of a 220m by 140m golf driving range. The total development will comprise -

- 46 golf driving bays, 20 under cover
- par 3 hole
- practice bunker
- night lighting
- night lighting
- parking for 90 cars
- mini golf area
- childrens playground
- putting green
- 215m² services building
- surround fencing
- surround landscaping

The administrative building will have a low form with extensive verandahs and incorporate toilets, storage areas, a kiosk, 40m² cafe, 40m² pro shop and an office.

Emphasis has been placed on the landscaping to provide screening for the golf range from the adjacent eastern cemetery and perimeter screen plantings, predominantly of signature plants of Sandringham area.

The screen fencing has been setback over 7.6m from the roadway and will be screened by plantings.

/2...

An area of some 0.4ha has been excised from north east and south western corners of the site for the purpose of this application to enable the Sandringham Small Bore Rifle Club to separately submit alternative applications for the establishment of a small bore rifle range.

The land will be occupied by the Eight Days per Week under a Ten Year Lease.

The proposal is considered to be generally consistent with the proposed reservation of the land for Public Open Space, to enable significant beneficial use to be made of this old tip site and to provide an important complementary golfing facility.

Your early consideration of this application would be appreciated.

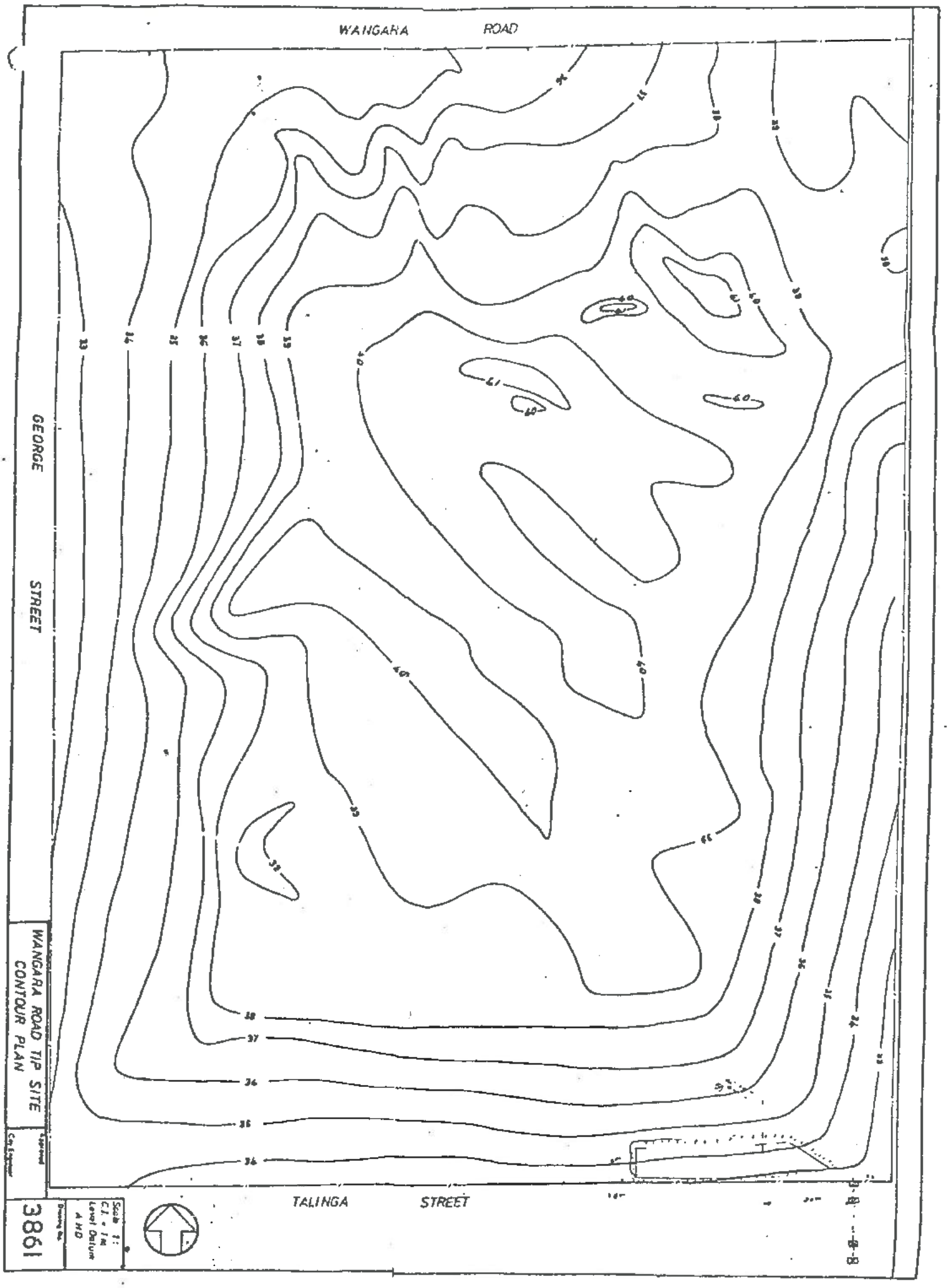
Yours faithfully

Mr P Anderson
Manager
Southern and Westernport Region
Ministry for Planning & Environment
Warrigal Road
MOORABBIN 3189

G C Barrow
CITY ENGINEER

copy to: Mr B Flynn
Eight Days a Week
1272 Dandenong Road
MURRUMBEENA 3163

CITY OF SANDRINGHAM



wangara road.

talinga road.

george street.

workshop

mini golf

stage 2

practice tee

chain wire screen

dead ground.

practice putting green

Native Flora Reserve
Retain existing flowering gums
Develop reserve and maintain

driving tee.

driving target

220metres.

green stage 2

administration building.

entry

childrens play & barbecue area

chain fence

car entry

overhead lighting stage 1 & stage 2

path

car parking 80 cars

Drain carpark as directed by SCC

car parking 30 cars.

practice bunker stage 2

chain wire screen

chain wire fence.

chain wire mesh fence

target complex building

3600 security fence.

grassed 48 m open range.

proposed International smallbore target shooting complex

4200 high butts fence.

3600 security fence.

30-0m

48.0m

12.0m

7.5m

15.0m

28.0m

297 69m

stage 1

stage 2

A B C D E F G H K M N O

landscape schedule.

A	Eucalyptus	Maculata	Spotted Gum
B		Veminalis	Ribbon Gum
C		Calophylla	Pink-Flowered Mar
D		Cladocalyx	Sugar Gum
E		Maculata	Spotted Gum
F		Melliodorarosea	Pink Flowered Box
G		Cladocalyx	Sugar Gum
H	Banksia	Integrifolia	Coastal Banksia
I	Eucalyptus	Leucoxylon Rosea	Pink Flowere White Ironbark
J		Sideroxylon Polons	Pink Flow Ironbark
K		Maculata	Spotted Gum
M		Cladocalyx	Sugar Gum
N		Citriodora	Lemon Scented G
		Camaldulensis	River Red Gum
O		Maculata	Spotted Gum
		Gamphocephala	Tuart Gum

note
all car parking and paths coloured yellow on site are of a granitic sand surface

SYMBOL
- Plan Height 300 To 500 mm
- Plan Height 1 To 1.5m
- Plan Height 2 To 2.5m

Copyright in this drawing and all work executed from it remains the property of the designers.
Contractors must set out all work and verify all conditions, levels and dimensions on site prior to commencement of any work or making of any shop drawing which must be submitted and approved prior to manufacture.
All work must be executed in accordance with the rules, by-laws, regulations and requirements of all authorities having jurisdiction over all or any part of the work.

a 27-2-86 relocate rifle range
a 7-12-85 stage 2 details

AMENDMENT ISSUE

PROJECT.
golf driving range.

CLIENT
8 days a week

GRAEME AINLEY & ASSOCIATES PTY LTD
Consulting, Structural and Civil Engineers
1st FLOOR
31 MELROSE STREET
SANDRINGHAM, 3191
Telephone: 598 3422 A.H. 598 5681

COMMITTEE OF WHOLE COUNCIL

Meeting held on Monday,
9th December, 1985
at 6.35 p.m.

PRESENT

Crs. Watson (Mayor), Bisset, Bottomley, Evans, Falloon, Merkus, Moller and Reynolds.

APOLOGIES

Cr. Hanlin.

e Sandringham
mall Bore Club

1. To further consider application by Sandringham Small Bore Rifle Club for Town Planning Permit in connection with lease of portion of the Wangara Road Reserve. (Referred from City Engineer's Report Clause 15, Council Meeting 6th November, 1985 following inspection Langwarrin Range).

Town Planning Officer's report is as follows:-

"Old Tip Site, Wangara Road, Sandringham
Proposed Rifle Range

Zoning:	Proposed Public Open Space.
Proposal:	Lease of 4,800m sq. of land for Small Bore Rifle range.
Parking:	30 spaces
Buildings:	28m by 28m 764m
Range:	20 stall, small bore, subsonic, baffled 50m long range.
Adjoining land uses:	Cheltenham Cemetery and factories opposite in industrial zone.
	Proposed lease of balance of site for golf driving range.

In 1981 after examination of many sites in Sandringham, Council leased the land to the Small Bore Rifle Club for 10 years to construct a new range.

In 1982 the Club carried out some preliminary earth works.

In 1983 the Cemetery advised of their concern and they undertook inspections of other ranges and surveyed cemetery users.

Committee of Whole Council (Cont'd)

Clause 1 (Cont'd)

In 1985 the Cemetery Trust advised Council they objected to the proposed rifle range. After inspecting the Geelong and Springvale ranges they are of the opinion that the noise from the range will be discernible in the cemetery causing distress to persons visiting graves. It is not anticipated there would be any conflict between funerals and the generally after hours shootings.

In August Council resolved to inspect a comparable facility before it decided whether to permit the rifle club to proceed with their permit application.

On Saturday the 9th November 1985 an inspection of the earth embankment Langwarrin Rifle range (situated adjacent to the Telecom Depot on the Langwarrin Reserve) indicated the noise from the rifle discharge was discernible outside the range at a distance of some 20 metres.

Whilst there was only one shooter and the volume of the noise was low, the sound was quite distinct.

With the installation of further baffles and a solid acoustic screen the sound levels could be further reduced, however it was agreed the sound will still be audible outside the range.

The Cemetery trust were more concerned by the nature and source of the noise, than volume or loudness of the sound.

At Wangara Road there are not any significant continuous intrusive industrial noises of sufficient volume that could effectively mask the sound of the shots.

Whilst the side mounding and on acoustic screens baffles could reduce the noise levels, it is probable that the noise will be audible in the western part of the cemetery.

This part of the cemetery was occupied mainly in the 1950's and 60's and does not appear to attract many visitors of a week-end.

Unless the S.S.B.R. Club are able to satisfy the Cemetery Trust that the sounds emanating from the range will not interfere with the peaceful, reverent attendance of persons visiting the cemetery on week-ends the Council should refuse its consent.

It is anticipated the rifle club will make a further submission to Council.

A further inspection was carried out by Councillors on Sunday 24th November 1985 at 9:30am.

Committee of Whole Council (Cont'd)

Clause 1 (Cont'd)

STAFF RECOMMENDATION

It is recommended that -

.1 Council note that the noise discharge will still be discernible in adjacent cemetery.

.2 The Small Bore Rifle Club be advised that on the basis of the serious concerns expressed by the Cemetery Trust after their inspections of the Springvale and Geelong ranges, and the sensitivity of the established Cemetery use, the Council would not favour the Small Bore Rifle Club proceeding with their proposed development of the site, because it appears unlikely that the Club can satisfactorily limit or modify their use to fully allay the concerns of the Cemetery Trust.

The Club be advised the Council is now of the view the use is incompatible and will detrimentally affect the use of of the adjoining land for cemetery purposes.

.3 The Cemetery Trustees be advised of this advice to the Rifle Club.

.4 The matter of the termination of their lease be considered by the Finance Committee.

.5 That although the staff do not know of any alternative sites of 4,800sq m in area that could be suitable for use by the Club.

Recommendation -

(1). That the report of the Town Planning Officer be received and the agreement with the Small Bore Rifle Club continue on the same basis as at present with the actual site for the range being discussed in the New Year at a meeting of Committee of Whole Council with representatives of the Rifle Club and the Golf Driving Range tenderer in attendance.

(2). That the Cemetery Trustees be advised accordingly.

Committee of Whole Council (Cont'd)

Clause 1 (Cont'd)

Cr. Bisset moved that the Clause be received and the recommendation adopted. Seconded by Cr. Merkus and carried.

re Golf Driving Range

2. To consider response from Eight Days a Week to matters raised in connection with tender submitted for Golf Driving Range lease.

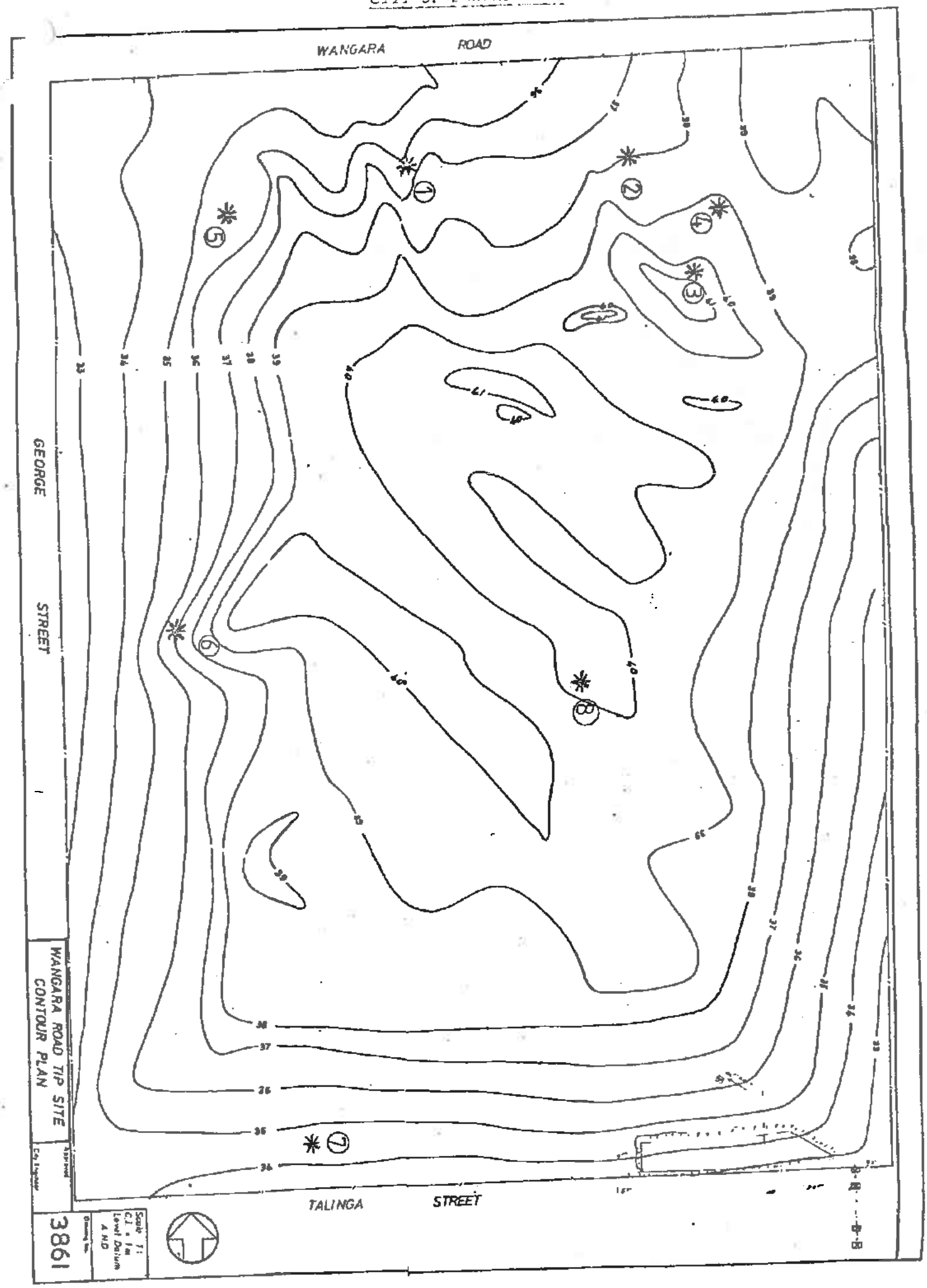
Recommendation -

(1). That the oral reports from the City Engineer and Town Clerk on the responses from Eight Days a Week be received and the firm be advised that the revised proposal submitted is acceptable and the Council is prepared to defer signing of the lease document and the lodging of the final deposit, on a without prejudice basis, until such time as the necessary Town Planning and Building Permits are issued subject to the obtaining of the permits being purused in a diligent manner.

(2). That in connection with the application for the Town Planning Permit -

.1 the tenderer be requested to supply detailed landscaping and development plans to enable the Council as the owner of the land to consider giving its consent to such application,

.2 during the Christmas Recess the Town Planning Committee together with any other Councillor able to attend be given power to act in the matter.



BORE HOLE LOCATIONS

BACKHOE SOIL TEST - OLD TIP SITE GLOVER STREET

- BOREHOLE LOG -

TEST PIT No. 3 LOG BY:- D. SUTCLIFFE DATE: 26/4/85

LEVEL FROM GROUND SURFACE DATUM OOC.		DISCRIPTION OF SOIL
		UNABLE TO BREAK THROUGH THE SURFACE - OLD 2" STONE (MACADAM) SURFACE HAS BEEN USED AS FILL.

BACKHOE SOIL TEST - OLD TIP SITE GEORGE STREET

- BOREHOLE LOG -

TEST PIT No. 4 LOG BY: D SUTCLIFFE DATE: 29/4/85

LEVEL FROM GROUND SURFACE DATUM 000.		DISCRIPTION OF SOIL
300		LOAMY TOPSOIL
500		WHITE COHESIONLESS SAND. - NATURAL MATERIAL LOOSE AND DRY
1500		BOTTOM OF TRENCH

BACKHOE SOIL TEST – OLD TIP SITE GEORGE STREET

– BOREHOLE LOG –

TEST PIT No. 1. LOG BY: D. SUTCLIFFE DATE: 26/4/85

LEVEL FROM GROUND SURFACE DATUM OOC.		DISCRIPTION OF SOIL
		SANDY LOAM
600		LAYER OF CLEAN FILL WITH SOME PLASTIC BAGS AND OLD SHOES, ETC.
1100		FILL – BROKEN BOTTLES, METAL, SOIL.
1800		BOTTOM OF TRENCH.

SOIL TEST - CLIENT

BOREHOLE LOG

LOG BY: D. SUTCLIFFE DATE: 26/4/05

	DISCRIPTION OF SOIL
	SANDY TOPSOIL
	FILL MATERIAL - OLD BOTTLES, SOIL CONCRETE BLUESTONES. PLASTIC BAGS.
	TOP OF NATURAL SOIL
	NATURAL LIGHT COHESIONLESS SAND LOOSE AND DRY.
	BOTTOM OF TRENCH
100	

Emmanuel Ernest

From: Abraham Albatat <AAlbatat@bayside.vic.gov.au>
Sent: Monday, 24 July 2017 3:35 PM
To: Emmanuel Ernest
Subject: RE: Sandringham Golf Driving Range - Information Required
Attachments: 20 Wangara Road CHELTENHAM 3192 - New titles & parcels registered.pdf; Capture.PNG; Certificate of Title - Plan of Consolidation 164614Y - 20 ~ Sandringham Driving Range Leasee.pdf

Hi Emmanuel,

Please see attached copies of title for the property that I got from our database. They may not exactly be 'current' though but still relevant.

In regards to the current owner, Bayside Council is the owner who is leasing it out to a private leasee.

Regards,

Abraham Albatat | Drainage Assets Engineer
City Assets & Projects
Bayside City Council
76 Royal Avenue Sandringham VIC 3191
Tel 9599 4489 | Fax 9598 4474
Email aalbatat@bayside.vic.gov.au
www.bayside.vic.gov.au

From: Emmanuel Ernest [mailto:emmanuelernest@iprimus.com.au]
Sent: Monday, 24 July 2017 2:59 PM
To: Abraham Albatat <AAlbatat@bayside.vic.gov.au>
Subject: RE: Sandringham Golf Driving Range - Information Required

Hi Abrham

Do you have current Title of Sandringham Golf Range and Details of the Current owner for the Report.

Emmanuel Ernest

From: Abraham Albatat [mailto:AAlbatat@bayside.vic.gov.au]
Sent: Monday, 24 July 2017 11:04 AM
To: Emmanuel Ernest
Subject: RE: Sandringham Golf Driving Range - Information Required

Dear Emmanuel,

Please find attached a copy of the services plan for the above property.

A legend for the attached services plan is as follows:

Blue - Council stormwater drainage;
Brown - Sewer (assets maintained by South East Water);
Green - Melbourne Water drainage (pipes/canals);
Contours are also shown.

Regards,



HISTORY

- In 1985, Bruce Green identified a need for a golf practice facility in the Bayside area and came upon the disused tip area in Holloway Rd (now Wangara Rd)
- The 15 acre site was totally overgrown and littered with car bodies, rocks, massive overgrowth and the occasional tree
- About six months later the, then, Sandringham Council advertised for expressions of interest for the site to be developed for purposes including a golf practice range. The Council required all development costs to be borne by the successful tenderer.
- Bruce formed a syndicate comprising himself, Head Professional of Royal Melbourne Golf Club, Barry Flynn a marketing expert, Peter Williams the Course Superintendent at the Royal Melbourne Golf Club, and local businessman Stan Lenepvue ,who together with Bruce's mother Iris Green financed the project.
- Initial funds of $320,000 were invested in 1986 building driving bays and office facilities, totally levelling the site, growing grass and planting some 800 indigenous trees.
- Over the ensuing years, the facility grew in popularity and in 1994 was further developed by constructing a mini golf facility and upgrading the ball dispensing area. The total cost was $277,210.
- In late 1999, the Dunlop factory in George Street closed down and the site was sold for housing. Safety issues with the new housing forced the dismantling of the existing practice bays to re-align them. The opportunity was taken to construct covered "Driving Bays" and substantially upgrade the existing food and beverage dispensing area. A properly functioning Café/Restaurant, catering for the disabled which included wheelchair path and toilet facilities was constructed at a total cost of $1,148,643.
- The total capital investment in the Driving Range since its establishment in 1986 is over $2,000,000.
- The first ever Bayside Golf Academy was created at the driving range and still operates from there today under the banner of the Sandringham Golf Academy.

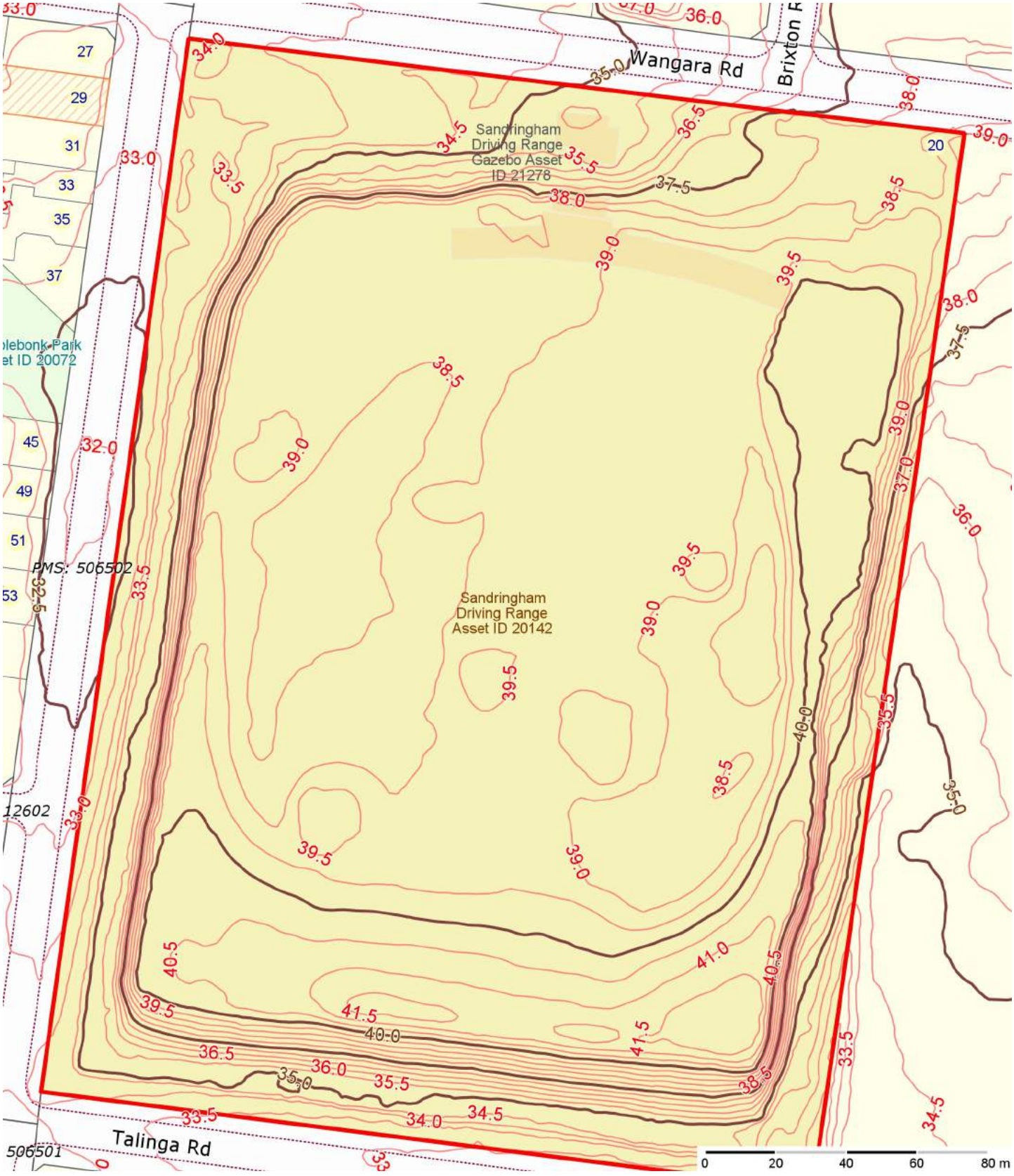


Humble Beginnings – Driving Range site in the beginning

APPENDIX M

REVIEW SITE AND REGIONAL CONTOUR MAP

FIGURE 10 - SITE CONTOUR MAP



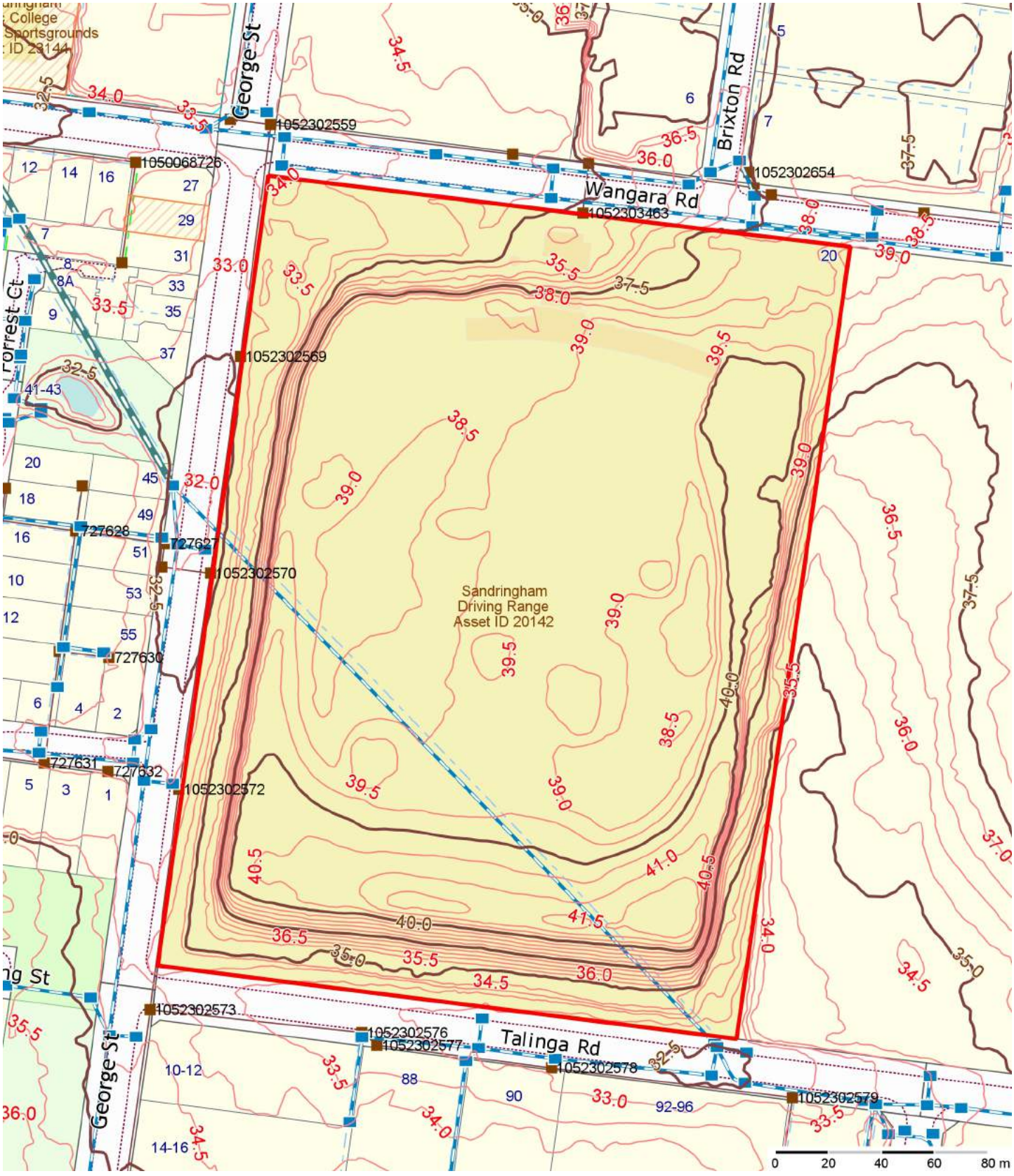
This map contains VicMap information. The State of Victoria, Department of Environment, Land, Water & Planning 2017.

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24/07/2017

1:1500

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Bayside City Council

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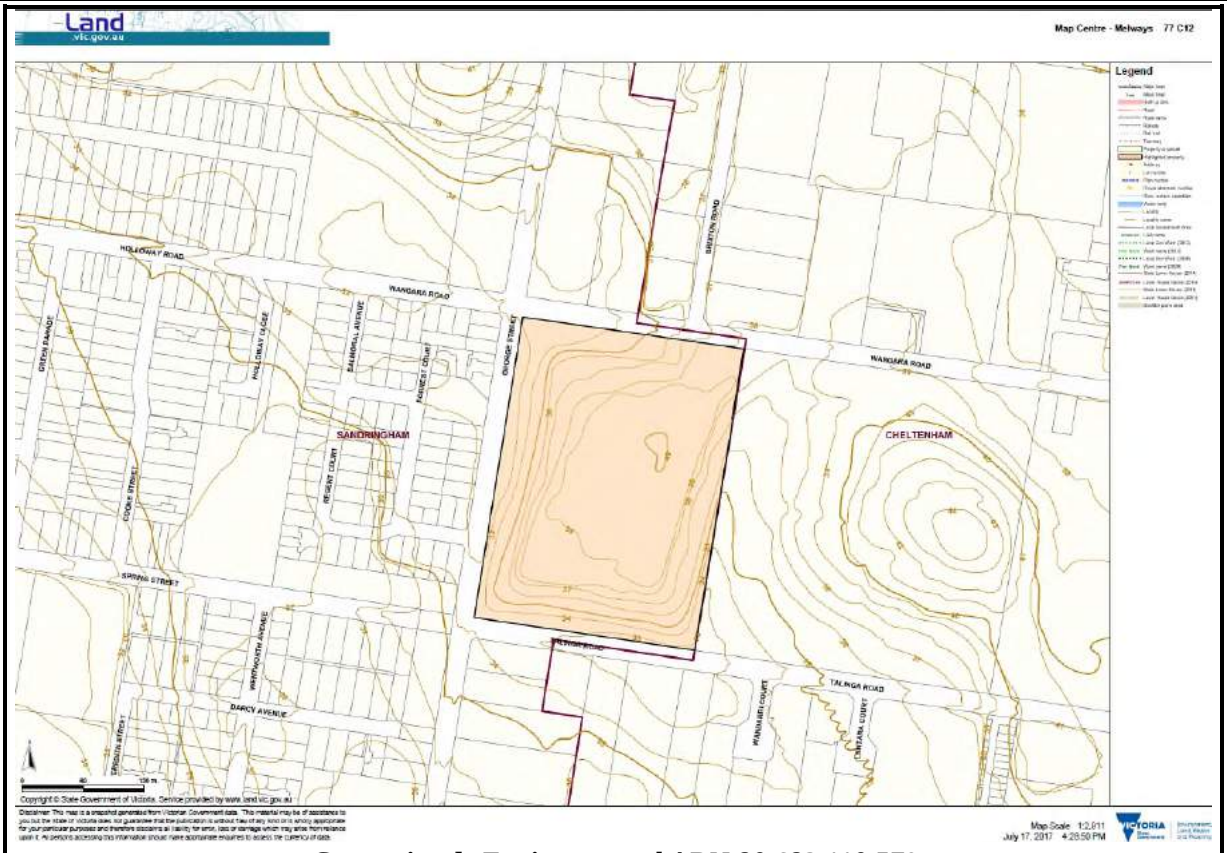
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24/07/2017

1:2000

Printed by
Abraham Albatat

FIGURE 11 - REGIONAL CONTOUR MAP



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM406-M.1	Map Description	Site Contour Map
Location	Sandringham Golf Driving Range (20 Wangara Road, Sandringham)	Source	Land Channel – Land.vic.gov.au
Date	19 July 2017	Project	Environmental Due Diligence

APPENDIX N
TITLE INFORMATION

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REGISTER SEARCH STATEMENT Land Titles Office, Victoria **Page 1**

VOLUME 09965 FOLIO 822 Security no : 124054098351X
Produced 17/02/2015 11:33 am

LAND DESCRIPTION
Land in Plan of Consolidation 164614Y.
PARENT TITLES :
Volume 04156 Folio 189 Volume 05678 Folio 536 Volume 06979 Folio 743
Volume 07760 Folio 066 to Volume 07760 Folio 067
Volume 09749 Folio 227 Volume 09933 Folio 756
Created by instrument CP164614Y 01/08/1990

REGISTERED PROPRIETOR
Estate Fee Simple
Sole Proprietor
THE MAYOR COUNCILLORS AND CITIZENS OF THE CITY OF SANDRINGHAM
CP164614Y 01/08/1990

ENCUMBRANCES, CAVEATS AND NOTICES
CAVEAT M737357G 10/03/1987
Caveator
GOLF DRIVING RANGE (SANDRINGHAM) PTY LTD
Capacity SEE CAVEAT
Lodged by
AMBROSY & FOX
Notices to
AMBROSY & FOX of 417 MALVERN ROAD SOUTH YARRA 3141

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 or imaged folio set out under DIAGRAM LOCATION below.

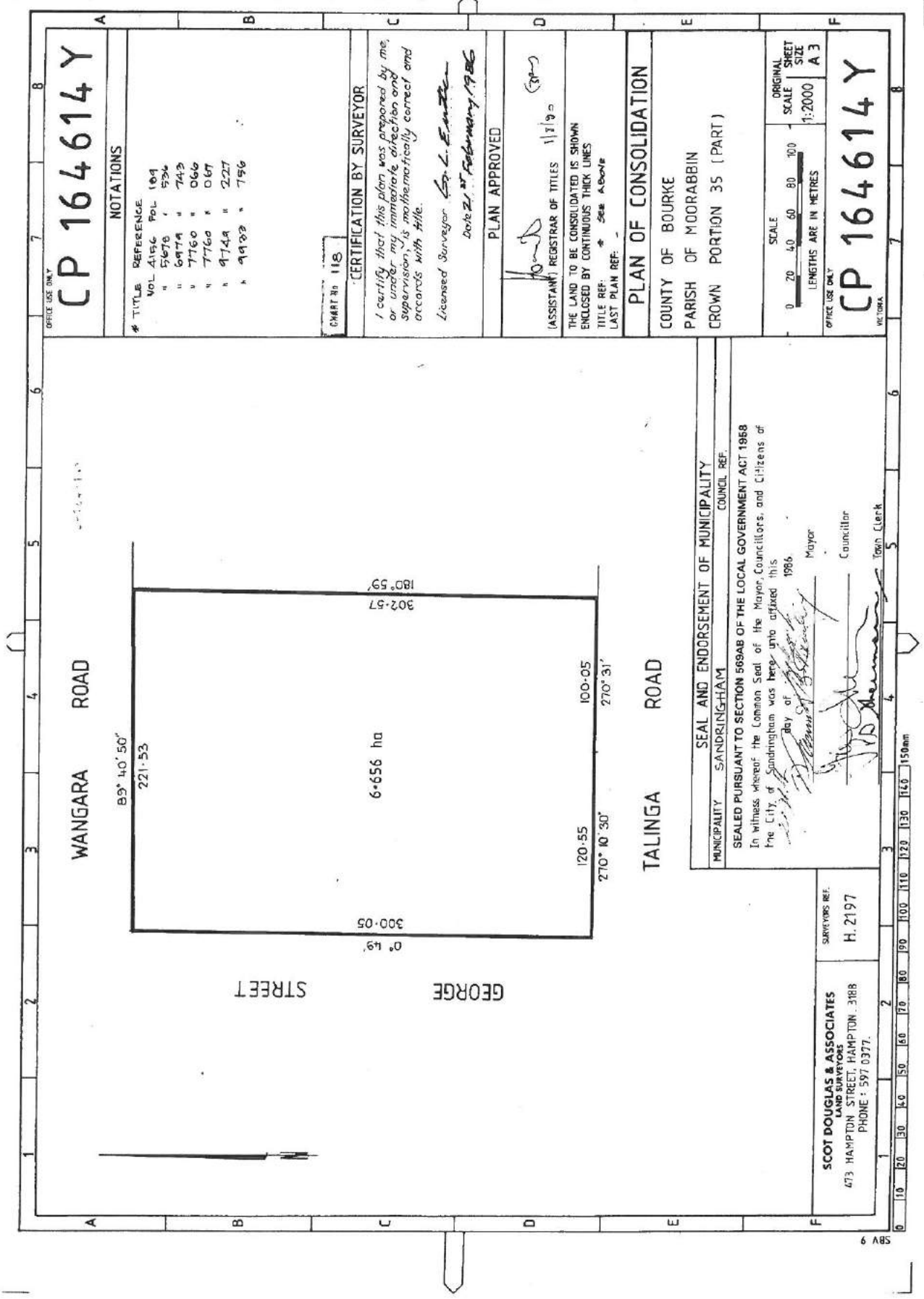
DIAGRAM LOCATION
SEE CP164614Y FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

DOCUMENT END

Delivered by LANDATA®. Land Victoria timestamp 06/03/2015 11:28
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Department of Transport, Planning and Local Infrastructure

17/06/2015

Bayside City Council

Re: Plan of Subdivision PS727384A (S)
Applicant Contact Ref: 9265N
Responsible Authority Ref: N/A, 15/5273
SPEAR Ref: S063899H

Please be advised that PS727384A was registered on 17/06/2015
New Titles (if any) have been allocated as follows.

Parent Title Details		New Title Details	
	Land Description	SPI	Vol/Fol
9965/822	Lot 1 on Plan of Subdivision 727384A.	1\PS727384	11578/207
	Lot 2 on Plan of Subdivision 727384A.	2\PS727384	11578/208

Chris McRae
Registrar of Titles

884166 — 20 WANGARA RD

LAND VICTORIA
Telephone: (03) 86362010
Email: subdivision.branch@dtpli.vic.gov.au

Signed by Council: Bayside City Council, PP Ref: N/A, Cert Ref: 15/5273, Original Certification: 06/05/2015, S.O.C.: 06/05/2015

PLAN OF SUBDIVISION

Under Section 35(8) of the Subdivision Act 1988

LV USE ONLY
EDITION 1

PS 727384A

Location of Land

Parish: MOORABBIN
Township: -
Section: -
Crown Allotment: -
Crown Portion: 35 (PART)

Title References: Vol. 9965 FoL. 822

Last Plan Reference: Land In CP 164614Y

Postal Address: GEORGE STREET
(At time of subdivision) SANDRINGHAM VIC 3191

MGA Co-ordinates: E 326 960 Zone 55
(of approx. centre of plan) N 5 796 870 GDA94

COUNCIL NAME : BAYSIDE CITY COUNCIL

A. This is a plan under Section 35(8) of the Subdivision Act 1988 which does not create any additional lots.

B. This plan is exempt from Part 3 of the Subdivision Act 1988

C. This is a plan under Section 35(8) of the Subdivision Act 1988 which creates(an) additional lot(s).

D. It is certified under Section 6 of the Subdivision Act 1988

E. It is certified under Section 11(7) of the Subdivision Act 1988.

F. Date of original certification under Section 6 / /2014

G. This is a statement of compliance under Section 21 of the Subdivision Act 1988.

Council delegate

Council Seal
Date / /

VESTING OF ROADS AND/OR RESERVES

IDENTIFIER	COUNCIL/BODY/PERSON
NIL	NIL

NOTATIONS

DEPTH LIMITATION DOES NOT APPLY

Staging
This is not a staged subdivision.
Planing Permit No.

Survey: This plan is based on survey.

This survey has been connected to Permanent Marks no(s). 150, 152, 153 & 302
In Proclaimed Survey Area No. -

NOTATIONS

The land being subdivided is enclosed within thick continuous lines.

No land is to be acquired on the basis of this plan.

WARNING - Use of or reliance on the information in this document is your own risk. It no longer has any legal status. For details of the current document, you should make inquiries at Land Victoria.

EASEMENT INFORMATION

LEGEND: A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
E-1	DRAINAGE	3m	THIS PLAN	BAYSIDE CITY COUNCIL

Hellier McFarland
Development Consultants Town Planners Land Surveyors
342 Hawthorn Rd, Caulfield South, VIC 3162
Tel: 03 9532 9951 Fax: 03 9532 9941
www.hmf.com.au | info@hmf.com.au

CAD REF: 9265N_1C.dwg
COMPS REF: 9265N 2014-03-14 SURROUND.sss

DIGITALLY SIGNED BY LICENSED SURVEYOR:
ROHAN MICHAEL BAKKER

REF 9265N/1 VERSION C

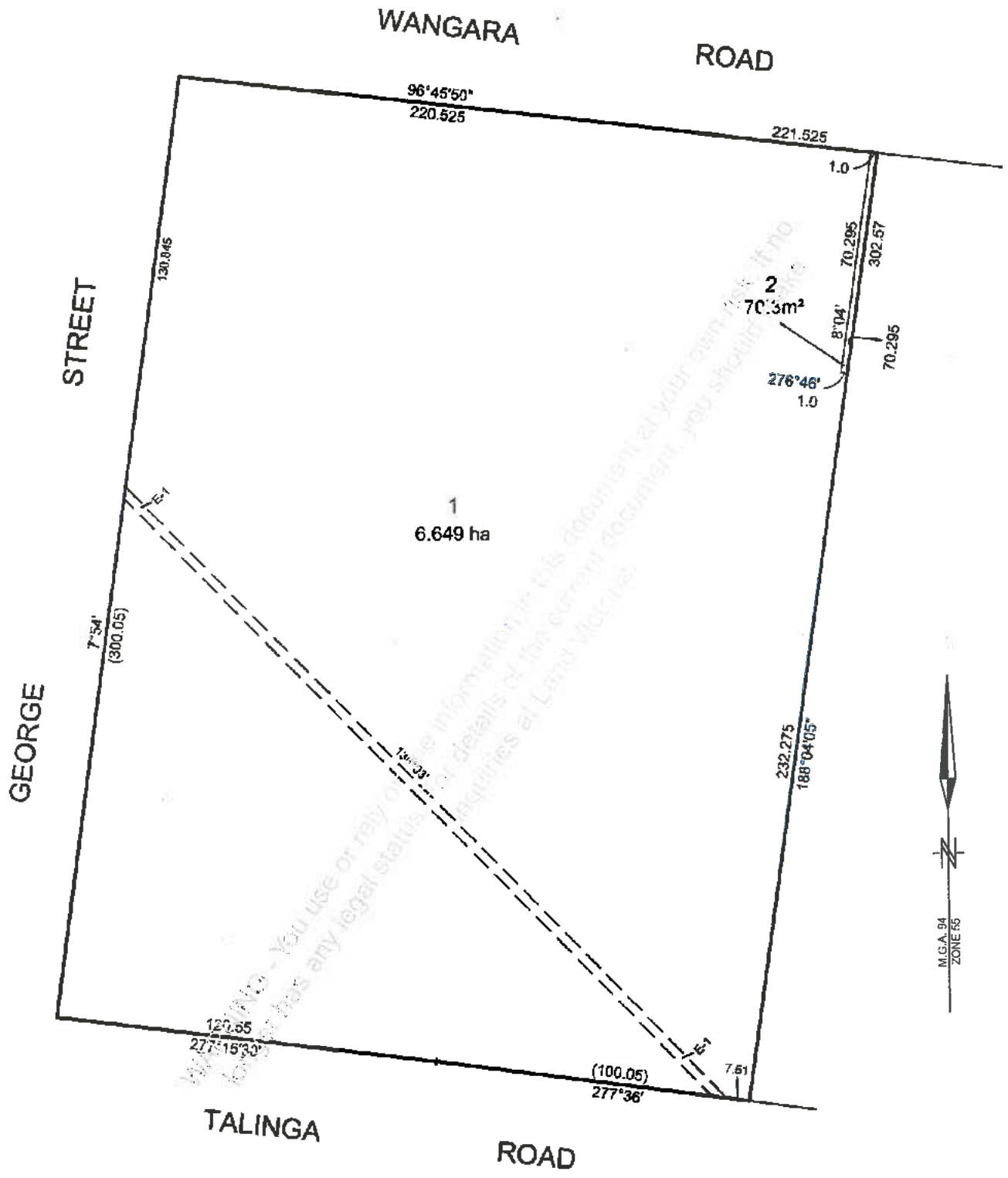
Sheet 1 of 2 Sheets
ORIGINAL SHEET SIZE A3

LV USE ONLY
PLAN REGISTERED
TIME
DATE / /
Assistant Registrar of Titles

Signed by: Rohan Michael Bakker (Hellier McFarland) Surveyor's Plan Version (C) SPEAR Ref: S063899H 21/04/2015

Signed by Council: Bayside City Council, PP Ref: N/A, Cert Ref: 15/5273, Original Certification: 06/05/2015, S.O.C.: 08/05/2016

PS 727384A



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Hellier McFarland
Development Consultants Town Planners Land Surveyors
342 Hawthorn Rd, Caulfield South, VIC 3162
Tel: 03 9532 9951 Fax: 03 9532 9941
www.hmf.com.au | info@hmf.com.au

SCALE
12.5 0 12.5 25 37.5 40
LENGTHS ARE IN METRES

ORIGINAL SCALE 1:1250

Sheet 2
ORIGINAL SHEET SIZE A3

DIGITALLY SIGNED BY LICENSED SURVEYOR:
ROHAN MICHAEL BAKKER

REF 9265N/1 VERSION C

COUNCIL NAME : BAYSIDE CITY COUNCIL
COUNCIL REF : -

CAD REF: 9265N_1C.dwg
COMPS REF: 9265N 2014-03-14 SURROUND.cos

Signed by: Rohan Michael Bakker (Hellier McFarland) Surveyor's Plan Version (C) SPEAR Ref: S063699H 21/04/2015

Environmental Risk Sciences Pty Ltd
PO Box 2537
Carlingford Court NSW 2118

Phone: +61 2 9614 0297
Fax: +61 2 8215 0657
Email: Jackie@enrisks.com.au or
therese@enrisks.com.au

www.enrisks.com.au

19 June 2018

Denise Whitehead/Iqbal Kabir
Bayside City Council
76 Royal Ave
Sandringham VIC 3191

Cc: Emmanuel Ernest, Geoaquitards Environmental

Risk Assessment: Sandringham Golf Driving Range, 20 Wangara Road Sandringham

1.0 Background

Environmental Risk Sciences Pty Ltd (enRiskS) has been commissioned by Bayside City Council to conduct a human health and ecological risk assessment (HHERA) in relation to the presence of contamination in surface soil at the property located at 20 Wangara Road in Sandringham, Victoria ("the site").

Investigations undertaken at the site have identified the presence of elevated concentrations of metals (lead, copper, zinc and tin) and total recoverable hydrocarbons (TRH >C16-C34). In addition, a range of odours were also identified in the subsurface.

The site is understood to have been formerly used as a landfill (up to 1968) and has subsequently been used as a rifle range and golf driving range.

The site is proposed to remain as open space; however it is to be redeveloped to include a number of netball courts.

2.0 Objectives

The objectives of the HHERA provided in this letter are:

- To quantify potential risks to human health associated with the presence of contamination that remains in surface soil on the site;
- To review and evaluate potential risks to the terrestrial environment, associated with the presence of contamination that remains in surface soil on the site;
- On the basis of the HHERA, identify any additional risk management measures that may be required to protect public health.

The HHERA has addressed human health and environmental risk issues associated with the proposed use of the site for recreational purposes, with netball courts to be constructed. The HHERA has only considered the proposed recreational development only. The HHERA has not addressed any other uses of the site or any off-site risks. It is also noted that the HHERA has only addressed risks posed by contamination identified in surface soil on the site.

No assessment of landfill gas has been undertaken as no data or other information is available.

3.0 Methodology

The methodology adopted for the conduct of this HHERA is in accordance with the relevant National protocols/ guidelines including:

- enHealth (enHealth 2012a) Environmental Health Risk Assessment, Guidelines for Assessing Human Health Risks from Environmental Hazards;
- enHealth (enHealth 2012b) Australian Exposure Factor Guide;
- ASC NEPM National Environmental Protection Measure – Assessment of Site Contamination including:
    - Schedule B1 Investigation Levels for Soil and Groundwater (NEPC 1999 amended 2013a)
    - Schedule B4 Guideline on Site-Specific Health Risk Assessment Methodology (NEPC 1999 amended 2013b)
    - Schedule B5 Guideline on Ecological Risk Assessment (NEPC 1999 amended 2013c)
    - Schedule B7 Guideline on Derivation of Health-Based Investigation Levels (NEPC 1999 amended 2013d) and
    - Toolbox Note – Key principles for the remediation and management of contaminated sites.

Where required, additional guidance has been obtained from relevant Australian and International guidance consistent with current industry best practice, such as that available from the USEPA and the World Health Organisation (WHO).

4.0 Review of available soil data and conceptual site model

4.1 Available data

Information relevant to the site and nature and extent of soil contamination on the site is available from the following:

- Geoaquitards 2017, Environmental Due Diligence Assessment, Sandringham Golf Driving Range, 20 Wangara Road, Sandringham VIC 3191. Report prepared for Bayside City Council, dated 24 July 2017. Laboratory reports relevant to this data have also been provided for this data.

4.2 Site description

The site, which is approximately 6.6 hectares in size, is located at 20 Wangara Road in Sandringham, which is approximately 17 kilometres to the south-east of Melbourne. The site is currently owned by Bayside City Council and is zoned Public Park and Recreation Zone (PPRZ). The zoning is not proposed to change.

The site is currently used as a golf driving range and is largely covered with grass. A club house is situated at the north of the site, and a gravel/concrete car park located in the north western part of the site. The perimeter of the site includes a soil embankment and trees. The site is surrounded by a cemetery (to the east), residential homes (to the west) and commercial/industrial premises (to the north and south).

The site was formerly used as a municipal landfill until 1968, with a former Pacific Dunlop Battery factory was to the west of the site. The site has been used for a golf driving range since 1986.

The site is proposed to be redeveloped as a netball facility. No specific development plans for the site have been provided, however information available on the Bayside City Council website indicates the site will include 12 outdoor courts and 2 indoor courts (likely to be developed at a later stage), with room to expand to include 1 additional indoor and 3 outdoor courts.

Geology

Investigations undertaken by Geoquitards (2017) indicates that the site comprises of fill materials to a depth of at least 3 m (the extent of intrusive investigations), described as sandy clay and silty clay with crushed rock, bricks, landfill rubbish, plastic, glass pieces.

Landfill odours were identified during intrusive works at depth of approximately 1m and deeper.

In areas away from the former landfill the natural soil is described as silty sand and clayey sand.

Potential exposures

In relation to the proposed use of the site, much of the site will be covered with concrete/netball court surface, with an indoor facility (presumable constructed on a concrete slab) proposed to be constructed at a later date. The presence of any surface cover will limit the potential for recreational users of the site to come into direct contact with surface soil. There may, however be the potential for recreational users (children and adults) to have some minor direct contact with surface soil on the site, where it remains accessible. The presence of good surface cover will prevent or minimise the potential for dust to be generated and hence the dust inhalation pathway is not considered to be of significance for future site users

Workers involved in the development of the site, or future intrusive maintenance works may come into direct contact with soil at the site. This may result in incidental ingestion and dermal contact with soil. These works may also result in the generation of dust, and hence the inhalation of dust is a potentially important pathway.

If any volatile chemicals are present, recreational users of the part and workers may be exposed via vapour inhalation.

In relation to the terrestrial environment, where the site is largely covered with concrete/netball court surface, there are no terrestrial environments that warrant protection. Where there are some other landscaped areas, these need to have soil quality that supports a suitable terrestrial environment to ensure plants can be grown and maintained. These are likely to be small areas. It is noted that the site cannot be considered to be a sensitive terrestrial environment that provides nesting and significant food sources to birds or mammals. Hence the key terrestrial environment that requires consideration relates to plants and soil invertebrates.

4.3 Soil investigations

Investigations conducted in 2017 involved the collection of soil samples from 11 locations in February 2017 (following a large grid type approach) and an additional 74 locations in July 2017 (following a tighter grid approach). **Figure 1** shows the locations of all the soil samples collected across the site. The number of soil samples collected across the site (85) complies with the minimum requirements of AS4482.1, in terms of the number of sample locations.

Soil samples were collected from a range of depths including 0.15, 0.5, 1.0, 1.5, 2.0, 2.5 and 3.0 m below ground level (mbgl). Soil samples were analysed for metals with selected samples also analysed for total recoverable hydrocarbons (TRH), benzene toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), phenols, organochlorine pesticides (OCPs), acid herbicides, PCBs, volatile organic compounds (VOCs) and asbestos. Aesthetic issues were also logged and identified.

Geoaquitards (2017) provides an assessment of quality assurance and quality control (QA/QC), which concludes the data is representative and hence has been relied on in this assessment.



Figure 1: Soil sampling locations

4.4 Review of soil concentrations

Table 1 presents a summary of the maximum concentrations reported in soil (where detected in at least one sample). The maximum concentrations reported have been screened against both current human health risk based investigation guidelines relevant to potential exposures that may occur on the site, as follows:

- For recreational users of the site the following guidelines have been adopted:
  - NEPM Health Investigation Levels (HILs) and health Screening Levels (HSLs) relevant to recreational exposures (HIL/HSL-C) (NEPC 1999 amended 2013a). These criteria address incidental ingestion, dermal contact and dust inhalation by children and adults during recreational use. HSLs also address vapour inhalation exposures.
  - Where criteria are not available from the NEPM, residential soil criteria available from the USEPA and presented as Regional Screening Levels (RSLs) (USEPA 2017). These criteria are protective of exposure by children and adults via ingestion, dermal contact, dust inhalation and vapour inhalation outdoors. While these criteria relate to residential use, they are conservative for the assessment of recreational exposures.

  It should be noted that the above exposures relate to surface soil, hence the screening assessment has applied these criteria to the data relevant to surface soil, i.e. soil to 0.15 and most 0.5 m bgl. This is of particular relevance to soil that sits above the existing landfill. It is not expected that deeper soil from within the landfill will be excavated and moved on the site, due to the presence of municipal rubbish and landfill odours. The landfill materials are expected to remain at depth.

- For workers involved in construction, maintenance of subsurface services and gardening activities (where soil may be accessible) the following guidelines are relevant:
  - NEPM HILs and HSLs (or equivalent international guidelines) relevant to commercial/industrial workers (HIL/HSL-D) (NEPC 1999 amended 2013a) are considered to be adequately protective. These criteria address incidental ingestion, dermal contact and dust inhalation by adults in the workplace. HSLs also available from CRC CARE (CRC CARE 2011) that specifically address direct contact and vapour inhalation exposures for petroleum hydrocarbons. As all exposures will be outdoors (i.e. not inside a commercial/industrial building) the open space HSLs are adopted. These have been utilised where available.
  - Where HILs/HSLs are not available industrial soil RSLs (USEPA 2017) will be adopted. These criteria are protective of exposure by adults via ingestion, dermal contact, dust inhalation and vapour inhalation outdoors in the workplace.

  It should be noted that the above exposures relate to soil that can be encountered during intrusive works, which is typically to 1.5 m bgl. For this assessment all the soil data available (to 3 m bgl) has been considered.

- In relation to terrestrial environments, where these are relevant to the site, i.e. in landscaped areas, Ecological Investigation Levels and Ecological Screening Levels (EILs/ESLs) available from the NEPM (NEPC 1999 amended 2013a) are applicable. Where EILs/ESLs are not available from the NEPM, RIVM Intervention Values for soil have been adopted. These are criteria that are protective of 50% of species and would be applicable for a site where no sensitive plant species are expected to be present.

  For the assessment of ecological risks, fill materials in the top 0.5m may be relevant (refer to note above in relation to the removal of soil from the landfill) and from the natural materials to 2 m depth (where trees may be planted). There are no terrestrial values relevant to soil within the landfill.

All the available soil data is included in **Attachment A** for reference.

Table 1: Summary and review of soil data

Analyte detected	Maximum concentration in soil (mg/kg)			Screening Level Guideline (mg/kg)		
	Surface soil (to 0.5 m bgl) – fill and natural	**All depths**		**Recreational exposures** (compare with surface soil data)	**Workers conducting intrusive works** (compare with all depths)	**Terrestrial environments** (compare with surface soil and natural materials)
		Fill	**Natural materials**			
Arsenic	**110**	110	5.4	300 [N]	3000 [N]	100 [NE]
Cadmium	0.8	14	0.4	90 [N]	900 [N]	12 [R]
Chromium	52	110	27	300 [N]	3600 [N]	410 + B [NE]
Copper	**360**	170000	17	17000 [N]	240000 [N]	220 + B [NE]
Lead	**1000**	**7200**	38	600 [N]	1500 [N]	1100 [NE]
Manganese	--	100	--	19000 [N]	60000 [N]	NA
Mercury	5.7	6.6	0.2	80 [N]	730 [N]	No criteria available
Molybdenum	--	4	--	390 [U]	5800 [U]	NA
Nickel	46	300	16	1200 [N]	6000 [N]	220 + B [NE]
Selenium	--	3.5	--	700 [N]	10000 [N]	NA
Silver	0.5	111	--	390 [U]	5800 [U]	15 [R]
Tin	**270**	790	--	47000 [U]	700000 [U]	260 [R]
Zinc	**6100**	120000	450	30000 [N]	400000 [N]	730 + B [NE]
Carcinogenic PAHs as Benzo(a)pyrene TEQ	--	2	--	3 [N]	40 [N]	NA
Naphthalene	--	0.6	--	1900 [C]	11000 [C]	NA
Total PAH	--	12.8	--	300 [N]	4000 [N]	NA
Benzene	--	0.1	--	120 [C]	77 [C]	NA
Xylenes	--	2	--	15000 [C]	130000 [C]	NA
TRH >C10-C16 (F2)	--	98	--	3800 [C]	62000 [C]	NA
TRH >C16-C34	--	970	--	5300 [C]	85000 [C]	NA
TRH >C34-C40	--	240	--	7400 [C]	120000 [C]	NA
Hexachlorobenzene	--	0.1	--	10 [N]	80 [N]	NA

Notes:

-- = chemical not detected above the analytical limit of reporting (LOR) in any of the soil samples analysed.

N = NEPM (2013) HIL/HSL "C" relevant to public open spaces and HIL/HSL "D" relevant to direct contact exposures during short term intrusive works. Where an HSL relevant to the vapour inhalation pathway is adopted the criteria is based on shallow soil impacts (0 to <1m depth) in sand.

C = CRC CARE Health Screening Levels (HSLs) for (CRC CARE 2011) for direct contact exposures (as this is the only relevant exposure pathway and/or the vapour criteria outlined in the NEPM are not limiting).

U = based on residential (adopted for public open space) and industrial soil guidelines available from USEPA (USEPA 2017).

R = RIVM soil intervention values, protective of serios risks to terrestrial environments (RIVM 2001, 2012).

NE = NEPM EILs for public open space. It is noted that some of the criteria from the NEPM are added concentration limits – i.e. additional concentrations above background (B). Background levels for these metals is not known for this area and has not been included in the criteria adopted for screening.

NA = no guideline is applicable as there are no detections of these chemicals in soil where the protection of terrestrial environments would be of importance. These chemicals have only been detected in the fill materials within the landfill where no terrestrial environments are present or would be expected to be of importance for the proposed development.

On the basis of the above screening level review only lead requires further consideration in relation to potential risks to human health. Arsenic, coper, tin and zinc also require further consideration in relation to potential ecological risks. These issues are further discussed in **Sections 5 and 6**.

5.0 Further assessment of potential human health risk issues

This section specifically relates to potential risk issues that may be relevant to the presence of lead in surface soil and in fill at depth.

Recreational exposures

In relation to potential recreational use of the site, lead that is present in surface soil is of relevance. It is not known which areas of the site are to be covered with netball courts and which areas will have accessible soil, hence this review has considered all the surface soil as potentially accessible post development.

The maximum lead concentration reported in surface soil was 1000 mg/kg. This was reported at 0.5 m in the fill materials at location 26. The lead concentration reported at location 26 at 0.15 m depth, which is considered more relevant to recreational exposures was 27 mg/kg, well below the recreational guideline of 600 mg/kg. All other lead concentrations were below the adopted screening criteria of 600 mg/kg relevant to recreational use of the site.

Hence, where surface materials are not significantly disturbed during development, future recreational exposures to lead are not considered to be of concern.

However, where some surface works occur, soil in the top 0.5 m may be moved and be placed near the surface where exposure may occur. Where all soil in the top 0.5 m are considered, the statistics for lead contamination meet the requirements outlined in the NEPM, as follows:

- 95% upper confidence limit (UCL) = 94.4 mg/kg, less than the recreational criteria of 600 mg/kg
- Maximum = 1000 mg/kg, less than 250% of the criteria
- Standard deviation = 101.4 mg/kg, less than 50% of the criteria

On this basis, there are no risk issues of concern in relation to the presence of lead in surface soil on the site, where recreational exposure may occur.

Exposures during intrusive works

Where workers may undertake construction or excavation works, lead concentrations reported in surface soil and in the natural soil on the site are below the relevant screening criteria of 1500 mg/kg. These are areas where excavation works are more likely to occur.

The maximum concentration of lead, 7200 mg/kg was reported at depth (3 m bgl) in the landfill fill materials at location 48. Lead in soil at all other depths at location 48 are well below the adopted screening criteria. In addition, all other lead concentrations reported within the landfill materials are below the screening criteria. Hence the detection at 3 m depth is considered an outlier and given the depth within the landfill, it is considered highly unlikely that excavations would occur to 3m depth in these areas. Hence there is little to no potential for any exposure to occur and risks are therefore considered negligible.

Should deep excavation occur within the landfill materials, an environmental management plan will be required to address the excavation and management of waste materials excavated and odours from the waste material. Such a management plan should also include the use of personal protective equipment such as gloves, long pants and long sleeves, to minimise exposure to the waste materials. These measures will also prevent or minimise any direct contact exposures with any lead that may be present at depth within the landfill.

On the basis of the above, there are no risk issues of concern in relation to the presence of lead in soil at the site, where exposure may occur during construction or intrusive maintenance works.

6.0 Further discussion of potential ecological risk issues

This section specifically relates to potential risk issues that may be relevant to the presence of arsenic, copper, tin and zinc in surface soil.

Arsenic

The maximum concentration of arsenic in surface soil, in the fill areas (110 mg/kg), only just exceeds the EIL relevant to open space (100 mg/kg). Only 1 sample has an arsenic concentration that exceeds the adopted criteria, with all other concentrations well below the EIL of 100 mg/kg. The average (5.9 mg/kg), which is more relevant to the evaluation of ecological effects and 95% UCL (10.1 mg/kg) (a more conservative value) are both well below the EIL and hence the potential for adverse ecological risk issues of concern is considered to be negligible.

Tin

The maximum concentration of tin in surface soil, in the fill areas (270 mg/kg), only just exceeds the adopted screening criteria of 260 mg/kg from RIVM (RIVM 2001, 2012). Only 1 sample has a tin concentration that exceeds the adopted criteria, at location 25 at 0.5m depth. The tin concentration in the more shallow soil sample at location 25 (0.15 m bgl) was much lower at 15 mg/kg. All other concentrations were either reported as not detected (i.e. <10 mg/kg) or at a concentration that is well below the adopted screening criteria. The average (12.6 mg/kg), which is more relevant to the evaluation of ecological effects and 95% UCL (16.2 mg/kg) (a more conservative value) are both well below the adopted screening criteria. The average and 95% UCL are also below the RIVM benchmark value of 19 mg/kg relevant to the protection of more sensitive species. Hence the potential for adverse ecological risk issues of concern is considered to be negligible.

Copper

The maximum concentration of copper in surface soil, in the fill areas (360 mg/kg), exceeds the EIL of 220 mg/kg (assuming negligible contribution from background soil). Only 1 sample has a copper concentration that exceeds the adopted criteria, at location 17 at 0.5m depth. The copper concentration in the more shallow soil sample at location 17 (0.15 m bgl) was much lower at 15 mg/kg. All other concentrations are well below the EIL for recreational areas. The average (16.8 mg/kg), which is more relevant to the evaluation of ecological effects and 95% UCL (30.9 mg/kg) (a more conservative value) are both well below the EIL. Hence the potential for adverse ecological risk issues of concern is considered to be negligible.

Zinc

The maximum concentration of zinc in surface soil, infill areas (6100 mg/kg) is significantly higher than the EIL of 730 mg/kg (assuming negligible contribution from background soil). There are 3 soil samples where the EIL is exceeded, location 49 (6100 mg/kg at 0.15 m and 960 mg/kg at 0.5 m) and location 25 (1300 mg/kg at 0.5 m). Location 25 is in the fill embankment along the site boundary with Wangara Road, while location 49 is located above the landfill area. All other concentrations of copper are well below the EIL. This indicates that the elevated zinc concentrations in surface soil are not widespread. As there are only discrete areas of elevated concentrations, consistent with heterogeneous fill, this is not expected to be of significance to the terrestrial environment as plant roots will move around areas of higher toxicity and soil invertebrates may not dwell in these discrete areas.

For zinc to be of concern to plants and soil invertebrates, it needs to be bioavailable to be able to be taken up into these species. Testing of leachability of zinc in soil at the site was undertaken on the soil sample with the maximum concentration of zinc (location 48 at 3 m depth, where zinc was reported at 120000 mg/kg). ASLP testing reported zinc in solution at 2.1 mg/L. This results in a soil-water partitioning coefficient of 57142.8 (L/kg), or log Kd = 4.76. This indicates that the zinc will not leach significantly, however it also indicates that very little zinc will be able to move into soil solution and be available for uptake into plants and soil invertebrates.

On this basis the potential for adverse effects on the terrestrial ecosystem that may be present on the site, post development is considered low. It is likely that the areas of elevated zinc will be beneath the proposed netball courts where there are no terrestrial environments that require protection.

Where landscaped areas are established on the site, it is unlikely there will be any issues in relation to the terrestrial environment. Any risks would be lower where clean topsoil or mulch were used to establish the garden areas. The use of organic rich topsoil would be expected for the site as the fill materials have low organic carbon content (0.2 to 1.4%).

7.0 Conclusions

Investigations conducted at the site have identified the presence of elevated concentrations of metals in surface soil and in fill materials at depth within the former landfill area.

Further review of the concentrations reported in soil on the site has indicated that the site is suitable for the proposed use for a number of outdoor and (potentially) indoor netball courts. Specifically, this assessment has concluded the following:

- The concentrations reported in surface soil, that may remain accessible to future recreational users of the site, are of no concern in relation to risks to human health;
- The concentrations reported in soil, that may be disturbed or exceed during the proposed development or during future intrusive works, are not of concern in relation to risks to the health of workers. It should be noted that any excavations that are required to extend into the landfill waste materials would require an environmental management plan to address the excavation and management of waste, generation of odours and minimise direct contact exposures by workers.
- The concentrations reported in soil, that may be of relevance to future terrestrial environments on the site are not considered to be of concern to ecological health. Imported topsoil and/or organic matter is expected to be required for landscape areas as the natural fill materials have very low organic content. The use of such materials will lower the risks further.

8.0 Limitations

enRiskS has prepared this report for the use of Bayside City Council in accordance with the usual care and thoroughness of the consulting profession. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report.

It is prepared in accordance with the scope of work and for the purpose outlined in the **Section 2** and data provided for the purpose of this evaluation.

The methodology adopted and sources of information used are outlined in this report. enRiskS has made no independent verification of this information beyond the agreed scope of works and assumes no responsibility for any inaccuracies or omissions. No indications were found that information contained in the report provided by Geoaquitards was false.

This report was prepared in May and June 2018 and is based on the information provided and reviewed at that time. enRiskS disclaims responsibility for any changes that may have occurred after this time.

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

If you require any additional information or if you wish to discuss any aspect of this assessment please do not hesitate to contact Jackie on (02) 9614 0297 or 0425 206 295.

Yours sincerely,



Dr Jackie Wright (Fellow ACTRA)
Principal/Director
Environmental Risk Sciences Pty Ltd

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Attachment A: Soil Data

Geoaquitards Environmental

							OCP		BTEX					
							Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL									0.1	0.1	0.1	0.2	0.1	0.3
NEPM 2013 Table 1A(1) HILs Rec C Soil														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									120	5300	18000			15000
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand														
0-1m									NL	NL	NL			NL
1-2m									NL	NL	NL			NL
2-4m									NL	NL	NL			NL
Csat									360	64	560			300
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt														
0-1m						Human health			NL	NL	NL			NL
1-2m									NL	NL	NL			NL
2-4m									NL	NL	NL			NL
Csat									440	69	640			330
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay														
0-1m									NL	NL	NL			NL
1-2m									NL	NL	NL			NL
2-4m									NL	NL	NL			NL
Csat									430	68	630			330
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space														
ANZECC 1992														
US EPA ECO-SSL														
CSQG Residential/Parkland Use														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil						Maintenance of (highly modified) ecosystems.			65		105			
0-2m										125				45
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil														
0-2m									50	70	85			105
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**								
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	0.545	0.42	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-Jl02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-Jl02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-Jl02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-Jl02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-Jl02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-Jl02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-Jl02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-Jl02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-Jl02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-Jl02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-Jl02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-Jl02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-Jl02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-Jl02390	552701	1.50 M	FILL, silty SAND		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
21 @ 0.15M	3/07/2017	M17-Jl02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-Jl02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-Jl02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-Jl02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-Jl02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-Jl02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-Jl02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-Jl02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-Jl02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-Jl02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-Jl02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-Jl02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-Jl02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-Jl02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-Jl02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-Jl02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-Jl02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-Jl02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-Jl02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-Jl02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-Jl02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-Jl02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-Jl02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-Jl02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-Jl02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-Jl02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-Jl02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-Jl02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-Jl02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-Jl02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-Jl02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-Jl02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-Jl02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-Jl02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-Jl02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-Jl02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-Jl02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-Jl02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-

	Chlorinated Hydrocarbons																													
Field ID	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5		
CSQG Residential/Parkland Use				5																										
1 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
1 AT 2.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
10 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
11 AT 1.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
2 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
6 AT 1.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
8 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
Field ID	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil								10										
1 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
1 AT 2.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
10 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
11 AT 1.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.07	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
2 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
6 AT 1.0M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
8 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5
21 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

							OCP		BTEX						Chlorinated Hydrocarbons																														Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
							Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL									0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5			0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil																																																			10										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									120	5300	18000			15000																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																													
0-1m									NL	NL	NL			NL																																																
1-2m									NL	NL	NL			NL																																																
2-4m									NL	NL	NL			NL																																																
Csat									360	64	560			300																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																														
0-1m						Human health			NL	NL	NL			NL																																																
1-2m									NL	NL	NL			NL																																																
2-4m									NL	NL	NL			NL																																																
Csat									440	69	640			330																																																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																													
0-1m									NL	NL	NL			NL																																																
1-2m									NL	NL	NL			NL																																																
2-4m									NL	NL	NL			NL																																																
Csat									430	68	630			330																																																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																																													
ANZECC 1992																																																													
US EPA ECO-SSL																																																													
CSQG Residential/Parkland Use																		5																																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil						Maintenance of (highly modified) ecosystems.			65		105																																																				
0-2m										125				45																																																
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																														
0-2m									50	70	85			105																																																
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																								
38 @ 0.50M	3/07/2017	M17-JI02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-JI02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-JI02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-JI02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-JI02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-JI02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-JI02254	552701	1.50 M	FILL, silty SAND, Rubbish		0.425	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
40 @ 3.00M	3/07/2017	M17-JI02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-JI02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-JI02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-JI02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-JI02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-JI02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-JI02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-JI02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-JI02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-JI02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-JI02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-JI02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-JI02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-JI02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-JI02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-JI02220	552701	1.50 M	FILL, silty SAND		-	-	0.1	<0.1	<0.1	1.5	0.5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 3.00M	3/07/2017	M17-JI02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-JI02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-JI02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-JI02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-JI02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-JI02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-JI02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-JI02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-JI02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-JI02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8	<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
51 @ 3.00M	3/07/2017	M17-JI02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-JI02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-JI02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-JI02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-JI02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-JI02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-JI02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-JI02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-JI02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-JI02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-JI02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-JI02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-JI02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 3.00M	3/07/2017	M17-JI02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-JI02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-JI02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-JI02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-JI02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-JI02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-JI02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-JI02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-JI02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-JI02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-JI02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-JI02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-JI02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-JI02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-JI02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-JI02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-JI02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-JI02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-JI02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-JI02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-JI02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-JI02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-JI02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-JI02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-JI02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-JI02199	552701	1.50 M	FILL, silty SAND		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.15M	3/07/2017	M17-JI02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-JI02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-JI02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

							OCP		BTEX						Chlorinated Hydrocarbons																														Halogenated Benzenes								Halogenated Hydrocarbons					Halogenated Phenols				
							Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL									0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5			0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil																																																			10										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									120	5300	18000			15000																																															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																													
0-1m									NL	NL	NL			NL																																															
1-2m									NL	NL	NL			NL																																															
2-4m									NL	NL	NL			NL																																															
Csat									360	64	560			300																																															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																												
0-1m					Human health				NL	NL	NL			NL																																															
1-2m									NL	NL	NL			NL																																															
2-4m									NL	NL	NL			NL																																															
Csat									440	69	640			330																																															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																												
0-1m									NL	NL	NL			NL																																															
1-2m									NL	NL	NL			NL																																															
2-4m									NL	NL	NL			NL																																															
Csat									430	68	630			330																																															
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																																												
ANZECC 1992																																																												
US EPA ECO-SSL																																																												
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.													5																																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									65		105																																																	
0-2m										125				45																																															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																												
0-2m									50	70	85			105																																															
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																							
63 @ 1.50M	3/07/2017	M17-Jl02212	552701	1.50 M	FILL, silty SAND		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	3/07/2017	M17-Jl02214	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	3/07/2017	M17-Jl02303	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	3/07/2017	M17-Jl02304	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	3/07/2017	M17-Jl02305	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	3/07/2017	M17-Jl02285	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	3/07/2017	M17-Jl02286	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	3/07/2017	M17-Jl02287	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	3/07/2017	M17-Jl02288	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	3/07/2017	M17-Jl02289	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	3/07/2017	M17-Jl02370	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	3/07/2017	M17-Jl02268	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	3/07/2017	M17-Jl02269	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	3/07/2017	M17-Jl02193	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	3/07/2017	M17-Jl02194	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	3/07/2017	M17-Jl02195	552701	1.50 M	FILL, sandy CLAY		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	3/07/2017	M17-Jl02196	552701	2.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	3/07/2017	M17-Jl02297	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	3/07/2017	M17-Jl02298	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	3/07/2017	M17-Jl02299	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	3/07/2017	M17-Jl02300	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	3/07/2017	M17-Jl02301	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	3/07/2017	M17-Jl02328	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	3/07/2017	M17-Jl02329	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	3/07/2017	M17-Jl02330	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	3/07/2017	M17-Jl02331	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	3/07/2017	M17-Jl02377	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	3/07/2017	M17-Jl02256	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	3/07/2017	M17-Jl02257	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	3/07/2017	M17-Jl02189	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	3/07/2017	M17-Jl02190	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	3/07/2017	M17-Jl02191	552701	1.50 M	FILL, sandy CLAY		-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	3/07/2017	M17-Jl02192	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	3/07/2017	M17-Jl02206	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	3/07/2017	M17-Jl02207	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	3/07/2017	M17-Jl02208	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	3/07/2017	M17-Jl02291	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	3/07/2017	M17-Jl02292	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	3/07/2017	M17-Jl02293	552701	1.50 M	FILL, silty SAND, Rubbish		<0.7	<0.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-
75 @ 2.00M	3/07/2017	M17-Jl02294	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	3/07/2017	M17-Jl02295	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	3/07/2017	M17-Jl02290	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	3/07/2017	M17-Jl02403	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	3/07/2017	M17-Jl02375	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	3/07/2017	M17-Jl02376	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	3/07/2017	M17-Jl02373	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	3/07/2017	M17-Jl02374	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	3/07/2017	M17-Jl02371	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	3/07/2017	M17-Jl02372	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	3/07/2017	M17-Jl02398	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	3/07/2017	M17-Jl02394	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	3/07/2017	M17-Jl02395	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	3/07/2017	M17-Jl02396	552701	2.00 M	FILL, silty SAND, Rubbish		<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8	<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
82 @ 3.00M	3/07/2017	M17-Jl02397	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	3/07/2017	M17-Jl02391	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	3/07/2017	M17-Jl02392	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	3/07/2017	M17-Jl02393	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	3/07/2017	M17-Jl02399	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	3/07/2017	M17-Jl02400	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	3/07/2017	M17-Jl02401	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	3/07/2017	M17-Jl02402	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	3/07/2017	M17-Jl02205	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	3/07/2017	M17-Jl02238	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	3/07/2017	M17-Jl02267	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	3/07/2017	M17-Jl02315	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	3/07/2017	M17-Jl02316	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	3/07/2017	M17-Jl02317	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	3/07/2017	M17-Jl02346	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

	Category	Organochlorine pesticides EPAVic (OCP)	Other organochlorine pesticides EPAVic (OCP)	Benzene (BTEX)	Ethylbenzene (BTEX)	Toluene (BTEX)	Xylene (m & p) (BTEX)	Xylene (o) (BTEX)	Xylene Total (BTEX)
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.1	0.1	0.2	0.1	0.3
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health								
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	Human health			120	5300	18000			15000
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand	Human health								
0-1m	Human health			NL	NL	NL			NL
1-2m	Human health			NL	NL	NL			NL
2-4m	Human health			NL	NL	NL			NL
Csat	Human health			360	64	560			300
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt	Human health								
0-1m	Human health			NL	NL	NL			NL
1-2m	Human health			NL	NL	NL			NL
2-4m	Human health			NL	NL	NL			NL
Csat	Human health			440	69	640			330
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay	Human health								
0-1m	Human health			NL	NL	NL			NL
1-2m	Human health			NL	NL	NL			NL
2-4m	Human health			NL	NL	NL			NL
Csat	Human health			430	68	630			330
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.								
ANZECC 1992	Maintenance of (highly modified) ecosystems.								
US EPA ECO-SSL	Maintenance of (highly modified) ecosystems.								
CSQG Residential/Parkland Use	Maintenance of (highly modified) ecosystems.								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil	Maintenance of (highly modified) ecosystems.			65		105			
0-2m	Maintenance of (highly modified) ecosystems.				125				45
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	Maintenance of (highly modified) ecosystems.								
0-2m	Maintenance of (highly modified) ecosystems.			50	70	85			105
SPLIT 8		-	-	-	-	-	-	-	-
Number of Results		10	10	15	15	15	15	15	15
Minimum Concentration		0.425	0.3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Maximum Concentration		<1	<0.75	0.1	<0.1	<0.1	1.5	0.5	2
Average Concentration		0.48	0.36	0.053	0.05	0.05	0.19	0.08	0.27
Median Concentration		0.5	0.375	0.05	0.05	0.05	0.1	0.05	0.15
Standard Deviation		0.055	0.055	0.013	0	0	0.36	0.12	0.48
Geometric Standard Deviation		1.1	1.2	1.2			2	1.8	2
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL									
95% ProUCL – 95% Student's-t UCL									

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	

Statistical Summary

Chlorinated Hydrocarbons (part 1)

	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil															
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space															
ANZECC 1992															
US EPA ECO-SSL															
CSQG Residential/Parkland Use				5											
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil															
0-2m															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil															
0-2m															
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Results	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Average Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation															
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL															
95% ProUCL – 95% Student's-t UCL															

Chlorinated Hydrocarbons (part 2)

	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5		
NEPM 2013 Table 1A(1) HILs Rec C Soil															
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay															
0-1m															
1-2m															
2-4m															
Csat															
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space															
ANZECC 1992															
US EPA ECO-SSL															
CSQG Residential/Parkland Use															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil															
0-2m															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil															
0-2m															
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Results	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<7.4	<6.7
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8	<7
Average Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.14	0.25	0.25	0.25	0.25	0.25	3.8	3.4
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.1	0.25	0.25	0.25	0.25	0.25	3.7	3.35
Standard Deviation	0	0	0	0	0	0	0	0.069	0	0	0	0	0	0.14	0.069
Geometric Standard Deviation								1.5						1	1
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL															
95% ProUCL – 95% Student's-t UCL															

Halogenated Benzenes

	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil								10
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space								
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand								
0-1m								
1-2m								
2-4m								
Csat								
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt								
0-1m								
1-2m								
2-4m								
Csat								
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay								
0-1m								
1-2m								
2-4m								
Csat								
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space								
ANZECC 1992								
US EPA ECO-SSL								
CSQG Residential/Parkland Use								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil								
0-2m								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil								
0-2m								
SPLIT 8	-	-	-	-	-	-	-	-
Number of Results	8	8	8	8	8	8	8	10
Minimum Concentration	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1
Average Concentration	0.14	0.25	0.25	0.25	0.25	0.25	0.25	0.037
Median Concentration	0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.025
Standard Deviation	0.069	0	0	0	0	0	0	0.026
Geometric Standard Deviation	1.5							1.7
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL								
95% ProUCL – 95% Student's-t UCL								

Halogenated Hydrocarbons / Halogenated Phenols

	1,2-dibromoethane (Halogenated Hydrocarbons)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol (Halogenated Phenols)	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand										
0-1m										
1-2m										
2-4m										
Csat										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt										
0-1m										
1-2m										
2-4m										
Csat										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay										
0-1m										
1-2m										
2-4m										
Csat										
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space										
ANZECC 1992										
US EPA ECO-SSL										
CSQG Residential/Parkland Use										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										
0-2m										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil										
0-2m										
SPLIT 8	-	-	-	-	-	-	-	-	-	-
Number of Results	8	8	8	8	8	9	9	9	9	9
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
Average Concentration	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25	0.25
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25	0.25
Standard Deviation	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation										
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL										
95% ProUCL – 95% Student's-t UCL										

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

									Herbicides							Inorganics					Lead	MAH				
							Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid	Hedonal	Atrazine	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Cyanide (Free)	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil							120		800	1300	400		800	800	800	240					600					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																										
0-1m																										
1-2m																										
2-4m																										
Csat																										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt					Human health																					
0-1m																										
1-2m																										
2-4m																										
Csat																										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																										
0-1m																										
1-2m																										
2-4m																										
Csat																										
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																		450			1100					
ANZECC 1992																				<6 and >8						
US EPA ECO-SSL																										
CSQG Residential/Parkland Use					Maintenance of (highly modified) ecosystems.																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																										
0-2m																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																										
0-2m																										
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																				
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	35	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<1	<1	-	-	-	<20	-	-	-	-	<5	260	13	8.2	90	<0.5	<0.5	<0.5	<0.5	<1.1
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	120	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	38	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	44	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	6.1	7.6	130	<0.5	<0.5	<0.5	<0.5	<1.1
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	50	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	12	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	2.9	7.3	160	<0.5	<0.5	<0.5	<0.5	<1.1
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	190	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	16	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	<1	<1	-	-	-	<20	-	-	-	-	<5	110	9.4	8.8	41	<0.5	<0.5	<0.5	<0.5	<1.1
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	13	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	55	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	35	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	12	7.7	98	<0.5	<0.5	<0.5	<0.5	<1.1
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	63	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	77	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	5.8	7.9	22	<0.5	<0.5	<0.5	<0.5	<1.1
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	18	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.5	-	93	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	22	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	47	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-Jl02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	26	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-Jl02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	11	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-Jl02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	38	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-Jl02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3	-	8.9	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-Jl02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.7	-	13	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-Jl02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	29	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-Jl02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	12	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-Jl02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	55	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-Jl02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	120	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-Jl02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	16	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-Jl02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	85	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-Jl02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	27	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-Jl02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.4	-	7.2	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-Jl02390	552701	1.50 M	FILL, silty SAND		<1	<1	-	-	-	<20	-	-	-	-	-	-	2.2	-	-	-	-	-	-	<0.6
21 @ 0.15M	3/07/2017	M17-Jl02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	41	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-Jl02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	26	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-Jl02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3	-	6	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-Jl02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	40	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-Jl02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	46	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-Jl02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	66	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-Jl02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	24	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-Jl02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	500	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-Jl02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	27	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-Jl02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	1000	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-Jl02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	60	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-Jl02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6	-	12	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-Jl02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	<5	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-Jl02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.1	-	130	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-Jl02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7	-	53	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-Jl02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.2	-	78	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-Jl02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	20	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-Jl02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	15	-	27	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-Jl02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	17	-	37	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-Jl02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	43	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-Jl02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	47	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-Jl02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	23	-	120	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-Jl02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	15	-	24	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-Jl02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	35	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-Jl02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	28	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-Jl02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	31	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-Jl02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.7	-	22	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-Jl02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	40	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-Jl02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	13	-	44	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-Jl02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	74	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-Jl02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	81	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-Jl02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	37	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-Jl02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	9.3	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-Jl02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.8	-	34	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-Jl02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	43	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-Jl02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	27	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-Jl02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	14	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-Jl02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	15	-	-	-	-	-

	Metals																Organic			Organochlorine Pesticides													
	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	20000	90	300		300	17000	19000	80		1200	700			30000							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																	
0-1m																																	
1-2m																																	
2-4m																																	
Csat																																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																	
0-1m																																	
1-2m																																	
2-4m																																	
Csat																																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																	
0-1m																																	
1-2m																																	
2-4m																																	
Csat																																	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	100					410		220				270	10			730																	
ANZECC 1992															50																		
US EPA ECO-SSL					130						6.6																						
CSQG Residential/Parkland Use				10																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																		1300	5600														
0-2m																																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																	
0-2m																		300	2800														
Field ID																																	
1 AT 0.50M	4.3	-	-	<0.4	-	11	-	<5	-	<0.1	<5	5	<2	0.5	<10	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	17	-	-	<0.4	<1	34	-	11	-	<0.1	<5	13	<2	0.5	<10	99	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
1 AT 2.0M	16	-	-	<0.4	-	26	-	12	-	0.1	<5	13	<2	0.4	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	4.4	-	-	<0.4	-	8.2	-	9	-	<0.1	<5	14	<2	0.8	<10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	6.9	-	-	<0.4	-	13	-	6.2	-	<0.1	<5	7.4	<2	0.3	<10	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	4.5	-	-	<0.4	<1	15	-	11	-	0.1	<5	7.3	<2	<0.2	<10	280	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
10 AT 0.50M	2.7	-	-	<0.4	-	6.2	-	11	-	<0.1	<5	12	<2	<0.2	<10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	4.4	-	-	<0.4	-	6.7	-	10	-	<0.1	<5	29	<2	0.2	<10	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	3.1	-	-	0.5	<1	11	-	50	-	0.1	<5	5.8	<2	<0.2	<10	330	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
11 AT 1.0M	5.4	-	-	<0.4	-	27	-	17	-	<0.1	<5	11	<2	0.3	16	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	<2	-	-	<0.4	-	19	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	11	-	-	<0.4	<1	18	-	6.1	-	0.2	<5	10	<2	<0.2	<10	56	<50	180	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
2 AT 1.50M	13	-	-	<0.4	-	20	-	<5	-	<0.1	<5	11	<2	<0.2	<10	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	6.2	-	-	<0.4	-	12	-	23	-	0.8	<5	12	<2	0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	6.4	-	-	<0.4	-	14	-	9.6	-	<0.1	<5	9.5	<2	0.2	<10	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	3.7	-	-	<0.4	<1	8.5	-	32	-	<0.1	<5	9.6	<2	<0.2	12	82	<50	190	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
6 AT 1.0M	6.3	-	-	0.5	-	25	-	22	-	3.1	<5	21	<2	0.2	<10	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	2.1	-	-	<0.4	-	8.6	-	12	-	<0.1	<5	<5	<2	0.3	<10	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	3.3	-	-	<0.4	<1	12	-	<5	-	<0.1	<5	5.5	<2	<0.2	<10	25	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
8 AT 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	6.4	-	-	<0.4	-	22	-	8.4	-	<0.1	<5	21	<2	<0.2	<10	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	6.5	-	-	<0.4	-	21	-	5.6	-	<0.1	<5	10	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	8.4	-	-	<0.4	-	24	-	22	-	<0.1	<5	46	<2	0.3	<10	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	5	<2	<0.2	<10	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	<2	-	-	<0.4	-	8.3	-	19	-	<0.1	<5	11	<2	<0.2	<10	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	<2	-	-	<0.4	-	<5	-	13	-	0.2	<5	<5	<2	<0.2	<10	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	11	-	-	<0.4	-	25	-	15	-	<0.1	<5	24	<2	<0.2	<10	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	<2	-	-	<0.4	-	<5	-	360	-	<0.1	<5	<5	<2	<0.2	13	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	<2	-	-	<0.4	-	<5	-	5.5	-	<0.1	<5	<5	<2	<0.2	<10	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	15	-	-	<0.4	-	14	-	<5	-	<0.1	<5	9.3	<2	<0.2	<10	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 0.15M	9.3	-	-	<0.4	-	33	-	28	-	<0.1	<5	38	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3.2	-	-	<0.4	-	9	-	11	-	<0.1	<5	14	<2	<0.2	<10	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	<2	-	-	<0.4	-	<5	-	5.7	-	<0.1	<5	<5	<2	<0.2	<10	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	6.9	-	-	<0.4	-	8.9	-	12	-	1.2	<5	17	<2	<0.2	<10	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3.4	-	-	<0.4	-	5.6	-	9.6	-	0.2	<5	11	<2	<0.2	<10	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	16	-	-	<0.4	-	28	-	20	-	<0.1	<5	28	<2	<0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	<2	-	-	0.7	-	11	-	130	-	<0.1	<5	30	<2	<0.2	270	1300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	<2	-	-	<0.4	-	<5	-	6.2	-	<0.1	<5	<5	<2	<0.2	<10	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	4.1	-	-	<0.4	-	7.3	-	32	-	<0.1	<5	9.1	<2	<0.2	<10	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	<2	-	-	<0.4	-	5.6	-	15	-	<0.1	<5	<5	<2	<0.2	<10	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	<2	-	-	<0.4	-	<5	-	7	-	<0.1	<5	6.1	<2	<0.2	<10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	<2	-	-	<0.4	-	5.1	-	9.6	-	<0.1	<5	<5	<2	<0.2	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	<2	-	-	<0.4	-	<5	-	7.1	-	<0.1	<5	<5	<2	0.3	<10	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	2.8	-	-	<0.4	-	9.1	-	6.9	-	<0.1	<5	<5	<2	<0.2	<10	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	<2	-	-	<0.4	-	<5	-	5.2	-	<0.1	<5	<5	<2	<0.2	<10	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	2.8	-	-	<0.4	-	6.5	-	14	-	<0.1	<5	11	<2	<0.2	<10	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	<2	-	-	<0.4	-	<5	-	8.3	-	<0.1	<5	<5	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	<2	-	-	<0.4	-	<5	-	6.7	-	<0.1	<5	<5	<2	<0.2	<10	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	5.1	-	-	0.6	-	9.2	-	26	-	0.2	<5	9.7	<2	1	33	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	4.4	-	-	<0.4	-	15	-	<5	-	<0.1	<5	7.1	<2	<0.2	<10	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	17	-	-	<0.4	-	20	-	7.9	-	<0.1	<5	12	<2	<0.2	<10	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	5.9	-	-	<0.4	-	32	-	16	-	<0.1	<5	18	<2	<0.2	<10	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3.1	-	-	<0.4	-	6.1	-	5.8	-	0.1	<5	5.2	<2	<0.2	<10	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	6.5	-	-	<0.4	-	11	-	14	-	0.1	<5	21	<2	<0.2	25	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	4.3	-	-	<0.4	-	8.6	-	12	-	<0.1	<5	9.3	<2	<0.2	<10	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	9.6	-	-	<0.4	-	14	-	15	-	<0.1	<5	18	<2	<0.2	24	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	16	-	-	<0.4	-	21	-	26	-	<0.1	<5	27	2.6	<0.2	<10	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	2.8	-	-	<0.4	-	17	-	34	-	<0.1	<5	20	<2	<0.2	<10	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	<2	-	-	<0.4	-	5.2	-	6.5	-	<0.1	<5	6.2	<2	<0.2	<10	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	<2	-	-	<0.4	-	8.6	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3.1	-	-	<0.4	-	11	-	10	-	<0.1	<5	6.8	<2	<0.2	<10	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	<2	-	-	<0.4	-	<5	-	5.1	-	<0.1	<5	<5	<2	<0.2	<10	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3.5	-	-	<0.4	-	18	-	5.2	-	<0.1	<5	5.3	<2	<0.2	<10	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	4.1	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	<2	-	-	<0.4	-	<5	-	6.1	-	0.1	<5	<5	<2	0.2	<10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

									Herbicides							Inorganics					Lead	MAH					Metals																Organic			Organochlorine Pesticides													
							Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid	Hedonal	Atrazine	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Cyanide (Free)	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5		2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil							120		800	1300	400		800	800	800	240					600						300	90	20000	90	300		300	17000	19000	80		1200	700			30000							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																											3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																											
0-1m					Human health																																																						
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																											
0-1m																																																											
1-2m																																																											
2-4m																																																											
Csat																																																											
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																		450			1100						100					410		220				270	10			730																	
ANZECC 1992																				<6 and >8																					50																		
US EPA ECO-SSL																															130						6.6																						
CSQG Residential/Parkland Use																														10																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil					Maintenance of (highly modified) ecosystems.																																							1300	5600														
0-2m																																																											
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																											
0-2m																																												300	2800														
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																					
38 @ 0.50M	3/07/2017	M17-JI02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	18	-	-	-	-	-	7.7	-	-	<0.4	-	15	-	6.1	-	<0.1	<5	6.9	<2	<0.2	<10	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-JI02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.6	-	23	-	-	-	-	-	2.1	-	-	0.8	-	8.1	-	7.7	-	<0.1	<5	5.9	<2	<0.2	<10	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-JI02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	100	-	-	-	-	-	5	-	-	0.5	-	9.3	-	21	-	<0.1	<5	12	<2	<0.2	<10	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-JI02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	85	-	-	-	-	-	7.9	-	-	<0.4	-	26	-	17	-	<0.1	<5	18	<2	<0.2	14	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-JI02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	17	-	60	-	-	-	-	-	7.1	-	-	<0.4	-	19	-	55	-	0.1	<5	14	<2	<0.2	21	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-JI02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	110	-	-	-	-	-	3.5	-	-	<0.4	-	7.9	-	22	-	<0.1	<5	14	<2	<0.2	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-JI02254	552701	1.50 M	FILL, silty SAND, Rubbish		<1	-	<0.5	<0.5	<0.2	-	<0.5	<0.5	<0.5	<5	-	-	35	-	550	-	-	-	-	-	5.8	<2	<10	0.5	<1	14	<5	39	100	1	-	9.2	<2	-	-	610	-	-	-	<0.05	-	<0.05	<0.1	-	<0.1	-	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
40 @ 3.00M	3/07/2017	M17-JI02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	22	-	39	-	-	-	-	-	3.6	-	-	<0.4	-	7.6	-	9.1	-	<0.1	<5	5.7	<2	<0.2	51	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-JI02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.2	-	71	-	-	-	-	-	<2	-	-	<0.4	-	18	-	6.1	-	<0.1	<5	<5	<2	<0.2	<10	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-JI02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	27	-	-	-	-	-	6.1	-	-	<0.4	-	15	-	10	-	<0.1	<5	16	<2	<0.2	<10	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-JI02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	36	-	-	-	-	-	4.9	-	-	<0.4	-	18	-	10	-	<0.1	<5	22	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-JI02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.2	-	40	-	-	-	-	-	4.1	-	-	<0.4	-	9.7	-	13	-	<0.1	<5	9.2	<2	<0.2	<10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-JI02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	15	-	<5	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-JI02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	15	-	<5	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-JI02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	48	-	-	-	-	-	3.7	-	-	<0.4	-	5.9	-	20	-	<0.1	<5	5.7	<2	<0.2	<10	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-JI02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6	-	7.8	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-JI02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	7.1	-	-	-	-	-	2	-	-	<0.4	-	11	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-JI02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	16	-	51	-	-	-	-	-	5.7	-	-	<0.4	-	24	-	14	-	0.1	<5	10	<2	<0.2	24	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-JI02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	48	-	-	-	-	-	4.3	-	-	<0.4	-	9.3	-	19	-	<0.1	<5	9.3	<2	<0.2	<10	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-JI02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	14	-	-	-	-	-	2.8	-	-	<0.4	-	12	-	14	-	<0.1	<5	9.2	<2	<0.2	500	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-JI02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	39	-	-	-	-	-	4.7	-	-	<0.4	-	10	-	14	-	<0.1	<5	15	<2	<0.2	<10	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-JI02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	45	-	-	-	-	-	8.9	-	-	<0.4	-	15	-	14	-	<0.1	<5	14	<2	<0.2	<10	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-JI02220	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	12	-	78	-	-	-	-	2.2	4.6	-	-	0.5	-	30	-	20	-	1.6	-	17	-	-	-	120	98	840	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 3.00M	3/07/2017	M17-JI02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	20	-	49	-	-	-	-	-	10	-	-	1	-	35	-	72	-	<0.1	<5	17	<2	7.9	<10	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-JI02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	47	-	-	-	-	-	6.6	-	-	<0.4	-	12	-	11	-	<0.1	<5	10	<2	<0.2	<10	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-JI02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	93	-	-	-	-	-	3.8	-	-	<0.4	-	10	-	28	-	<0.1	<5	24	<2	<0.2	12	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-JI02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	16	-	83	-	-	-	-	-	6.8	-	-	1.1	-	16	-	39	-	<0.1	<5	11	2.3	<0.2	99	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-JI02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	30	-	7200	-	-	-	-	-	110	-	-	14	-	110	-	170,000	-	0.2	<100	300	<20	<50	790	120,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-JI02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	170	-	-	-	-	-	34	-	-	<0.4	-	52	-	37	-	<0.1	<5	13	<2	<0.2	<10	6100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-JI02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	210	-	-	-	-	-	27	-	-	<0.4	-	27	-	26	-	<0.1	<5	15	<2	<0.2	<10	960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-JI02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	110	-	-	-	-	-	13	-	-	<0.4	-	31	-	73	-	<0.1	<5	21	<2	<0.2	39	590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-JI02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	53	-	-	-	-	-	9.2	-	-	<0.4	-	30	-	8.8	-	<0.1	<5	14	<2	<0.2	<10	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-JI02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<1	<1	-	-	-	<20	-	-	-	-	<5	<100	4.1	7.3	150	<0.5	<0.5	<0.5	<0.5	<1.1	6.9	-	-	<0.4	<1	14	-	9.2	-	<0.1	<5	12	<2	<0.2	<10	40	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
51 @ 3.00M	3/07/2017	M17-JI02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	4.2	-	35	-	-	-	-	-	12	-	-	<0.4	-	18	-	17	-	<0.1	<5	15	<2	<0.2	<10	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-JI02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	51	-	-	-	-	-	3.5	-	-	<0.4	-	9.9	-	9.5	-	<0.1	<5	5.6	<2	<0.2	<10	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-JI02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	23	-	-	-	-	-	2.3	-	-	<0.4	-	6.9	-	6.7	-	<0.1	<5	<5	<2	0.3	<10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-JI02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	14	-	34	-	-	-	-	-	33	-	-	<0.4	-	28	-	9	-	<0.1	<5	8.5	<2	<0.2	<10	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-JI02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	11	-	45	-	-	-	-	-	7.6	-	-	<0.4	-	13	-	11	-	<0.1	<5	11	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-JI02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	12	-	43	-	-	-	-	-	4.7	-	-	<0.4	-	11	-	9.9	-	<0.1	<5	11	<2	<0.2	<10	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-JI02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	34	-	-	-	-	-	3.9	-	-	<0.4	-	6.6	-	11	-	<0.1	<5	7.8	<2	<0.2	<10	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-JI02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	97	-	-	-	-	-	4.7	-	-	<0.4	-	13	-	18	-	<0.1	<5	19	<2	<0.2	<10	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-JI02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	22	-	74	-	-	-	-	-	4.7	-	-	1.9	-	13	-	48	-	<0.1	<5	12	<2	23	11	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-JI02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	32	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	7.8	-	0.1	<5	<5	<2	<0.2	<10	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-JI02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	38	-	-	-	-	-	4.7	-	-	<0.4	-	14	-	11	-	<0.1	<5	20	<2	<0.2	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-JI02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	10	-	68	-	-	-	-	-	6.6	-	-	0.6	-	19	-	27	-	2.6	<5	15	<2	0.8	13	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-JI02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	22	-	360	-	-	-	-	<0.6	4.8	-	-	1.7	-	29	-	20	-	1	-	10	-	-	-	280	<50	970	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 3.00M	3/07/2017	M17-JI02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	120	-	-	-	-	-	4.9	-	-	0.7	-	13	-	21	-	0.3	<5	15	<2	<0.2	140	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-JI02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	52	-	-	-	-	-	6.5	-	-	<0.4	-	10	-	16	-	<0.1	<5	14	<2	<0.2	<10	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-JI02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	55	-	-	-	-	-	10	-	-	<0.4	-	28	-	30	-	0.2	<5	22	<2	<0.2	120	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-JI02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	40	-	-	-	-	-	5.8	-	-	<0.4	-	10	-	14	-	0.1	<5	12	<2	<0.2	29	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-JI02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	28	-	-	-	-	-	4.3	-	-	<0.4	-	16	-	9	-	<0.1	<5	5.9	<2	<0.2	<10	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-JI02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	22	-	-	-	-	-	2.3	-	-	<0.4	-	11	-	15	-	<0.1	<5	34	<2	<0.2	<10	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-JI02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	77	-	-	-	-	-	4.4	-	-	<0.4	-	8.7	-	11	-	0.1	<5	11	<2	<0.2	<10	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-JI02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	28	-	98	-	-	-	-	-	5.8	-	-	<0.4	-	22	-	26	-	0.3	<5	18	3.5	<0.2	150	420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-JI02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	44	-	-	-	-	-	2.3	-	-	<0.4	-	5.4	-	9.5	-	<0.1	<5	<5	<2	<0.2	<10	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-JI02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	11	-	160	-	-	-	-	-	22	-	-	<0.4	-	31	-	32	-	<0.1	<5	29	<2	<0.2	39	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-JI02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	150	-	-	-	-	-	23	-	-	<0.4	-	27	-	49	-	0.1	<5	25	<2	1.8	340	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-JI02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	11	-	400	-	-	-	-	-	6.2	-	-	<0.4	-	9.4	-	60	-	<0.1	<5	8.6	<2	<0.2	<10	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-JI02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7	-	39	-	-	-	-	-	6.2	-	-	<0.4	-	17	-	18	-	<0.1	<5	9.1	<2	<0.2	<10	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-JI02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	77	-	-	-	-	-	3.7	-	-	<0.4	-	8.3	-	20	-	<0.1	<5	5.9	<2	<0.2	<10	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-JI02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	53	-	-	-	-	-	8.4	-	-	0.8	-	20	-	23	-	<0.1	<5	18	<2	<0.2	<10	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-JI02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.9	-	63	-	-	-	-	-	110	-	-	<0.4	-	30	-	12	-	0.1	<5	22	<2	<0.2	<10	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-JI02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	4	-	42	-	-	-	-	-	4.5	-	-	<0.4	-	6.9	-	26	-	<0.1	<5	8.4	<2	<0.2	11	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-JI02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	9.5	-	40	-	-	-	-	-	9	-	-	<0.4	-	12	-	12	-	<0.1	<5	9.4	<2	<0.2	<10	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-JI02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	8.5	-	8.5	-	-	-	-	-	2.5	-	-	<0.4	-	9.8	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-JI02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	29	-	-	-	-	-	5.7	-	-	<0.4	-	8.8	-	9.5	-	<0.1	<5	8.1	<2	<0.2	<10	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-JI02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	13	-	38	-	-	-	-	-	4.9	-	-	<0.4	-	30	-	<5	-	<0.1	<5	11	<2	<0.2	<10	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-JI02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	70	-	-	-	-	-	7.4	-	-	<0.4	-	11	-	17	-	<0.1	<5	10	<2	0.2	<10	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-JI02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	12	-	33	-	-	-	-	-	5	-	-	0.7	-	11	-	24	-	4.2	<5	16	<2	<0.2	<10	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-JI02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	57	-	-	-	-	-	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-JI02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	29	-	-	-	-	-	3.9	-	-	<0.4	-	10	-	12	-	<0.1	<5	19	<2	<0.2	<10	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-JI02199	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	14	-	57	-	-	-	-	<0.6	12	-	-	<0.4	-	22	-	12	-	0.2	-	13	-	-	-	46	<50	370	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.15M	3/07/2017	M17-JI02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	47	-	-	-	-	-	5.5	-	-	<0.4	-	8.4	-	9.3	-	<0.1	<5	8	<2	<0.2	<10	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-JI02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	8	-	130	-	-	-	-	-	6.5	-	-	<0.4	-	16	-	72	-	0.1	<5	23	<2	<0.2	<10	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-JI02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	10	-	140	-	-	-	-	-	5.2	-	-	<0.4	-	13	-	29	-	0.1	<5	12	<2	<0.2	17	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
63 @ 1.50M	3/07/2017	M17-JI02212	552701	1.50 M	FILL, silty SAND	
63 @ 3.00M	3/07/2017	M17-JI02214	552701	3.00 M	FILL, silty SAND, Rubbish	
64 @ 0.50M	3/07/2017	M17-JI02303	552701	0.50 M	FILL, silty SAND	
64 @ 1.00M	3/07/2017	M17-JI02304	552701	1.00 M	FILL, silty SAND	
64 @ 2.50M	3/07/2017	M17-JI02305	552701	2.50 M	FILL, silty SAND, Rubbish	
65 @ 0.15M	3/07/2017	M17-JI02285	552701	0.15 M	FILL, silty SAND	
65 @ 1.00M	3/07/2017	M17-JI02286	552701	1.00 M	FILL, silty SAND, Rubbish	
65 @ 2.00M	3/07/2017	M17-JI02287	552701	2.00 M	FILL, silty SAND, Rubbish	
65 @ 2.50M	3/07/2017	M17-JI02288	552701	2.50 M	FILL, silty SAND, Rubbish	
65 @ 3.00M	3/07/2017	M17-JI02289	552701	3.00 M	FILL, silty SAND, Rubbish	
66 @ 1.50M	3/07/2017	M17-JI02370	552701	1.50 M	FILL, silty SAND	
67 @ 0.15M	3/07/2017	M17-JI02268	552701	0.15 M	FILL, silty SAND	
67 @ 0.50M	3/07/2017	M17-JI02269	552701	0.50 M	FILL, silty SAND	
68 @ 0.15M	3/07/2017	M17-JI02193	552701	0.15 M	FILL, silty SAND	
68 @ 0.50M	3/07/2017	M17-JI02194	552701	0.50 M	FILL, sandy CLAY	
68 @ 1.50M	3/07/2017	M17-JI02195	552701	1.50 M	FILL, sandy CLAY	
68 @ 2.00M	3/07/2017	M17-JI02196	552701	2.00 M	FILL, sandy CLAY, Rubbish	
69 @ 0.50M	3/07/2017	M17-JI02297	552701	0.50 M	FILL, silty SAND	
69 @ 1.00M	3/07/2017	M17-JI02298	552701	1.00 M	FILL, silty SAND	
69 @ 2.00M	3/07/2017	M17-JI02299	552701	2.00 M	FILL, silty SAND, Rubbish	
69 @ 2.50M	3/07/2017	M17-JI02300	552701	2.50 M	FILL, silty SAND, Rubbish	
69 @ 3.00M	3/07/2017	M17-JI02301	552701	3.00 M	FILL, silty SAND, Rubbish	
70 @ 0.15M	3/07/2017	M17-JI02328	552701	0.15 M	FILL, silty SAND	
70 @ 0.50M	3/07/2017	M17-JI02329	552701	0.50 M	FILL, silty SAND	
70 @ 1.50M	3/07/2017	M17-JI02330	552701	1.50 M	FILL, silty SAND	
70 @ 3.00M	3/07/2017	M17-JI02331	552701	3.00 M	FILL, silty SAND, Rubbish	
71 @ 2.50M	3/07/2017	M17-JI02377	552701	2.50 M	FILL, silty SAND	
72 @ 0.15M	3/07/2017	M17-JI02256	552701	0.15 M	FILL, silty SAND	
72 @ 0.50M	3/07/2017	M17-JI02257	552701	0.50 M	FILL, silty SAND	
73 @ 0.50M	3/07/2017	M17-JI02189	552701	0.50 M	FILL, sandy CLAY	
73 @ 1.00M	3/07/2017	M17-JI02190	552701	1.00 M	FILL, sandy CLAY	
73 @ 1.50M	3/07/2017	M17-JI02191	552701	1.50 M	FILL, sandy CLAY	
73 @ 3.00M	3/07/2017	M17-JI02192	552701	3.00 M	FILL, sandy CLAY	
74 @ 0.15M	3/07/2017	M17-JI02206	552701	0.15 M	FILL, silty SAND	
74 @ 0.50M	3/07/2017	M17-JI02207	552701	0.50 M	FILL, sandy CLAY	
74 @ 3.00M	3/07/2017	M17-JI02208	552701	3.00 M	FILL, sandy CLAY	
75 @ 0.15M	3/07/2017	M17-JI02291	552701	0.15 M	FILL, silty SAND	
75 @ 0.50M	3/07/2017	M17-JI02292	552701	0.50 M	FILL, sandy CLAY	
75 @ 1.50M	3/07/2017	M17-JI02293	552701	1.50 M	FILL, silty SAND, Rubbish	
75 @ 2.00M	3/07/2017	M17-JI02294	552701	2.00 M	FILL, silty SAND, Rubbish	
75 @ 2.50M	3/07/2017	M17-JI02295	552701	2.50 M	FILL, silty SAND, Rubbish	
76 @ 2.50M	3/07/2017	M17-JI02290	552701	2.50 M	FILL, silty SAND	
77 @ 3.00M	3/07/2017	M17-JI02403	552701	3.00 M	FILL, silty SAND, Rubbish	
78 @ 0.15M	3/07/2017	M17-JI02375	552701	0.15 M	FILL, silty SAND	
78 @ 0.50M	3/07/2017	M17-JI02376	552701	0.50 M	FILL, silty SAND	
79 @ 1.00M	3/07/2017	M17-JI02373	552701	1.00 M	FILL, silty SAND	
79 @ 3.00M	3/07/2017	M17-JI02374	552701	3.00 M	FILL, silty SAND, Rubbish	
80 @ 0.15M	3/07/2017	M17-JI02371	552701	0.15 M	FILL, silty SAND	
80 @ 0.50M	3/07/2017	M17-JI02372	552701	0.50 M	FILL, silty SAND	
81 @ 0.15M	3/07/2017	M17-JI02398	552701	0.15 M	FILL, silty SAND	
82 @ 0.15M	3/07/2017	M17-JI02394	552701	0.15 M	FILL, silty SAND	
82 @ 0.50M	3/07/2017	M17-JI02395	552701	0.50 M	FILL, silty SAND	
82 @ 2.00M	3/07/2017	M17-JI02396	552701	2.00 M	FILL, silty SAND, Rubbish	
82 @ 3.00M	3/07/2017	M17-JI02397	552701	3.00 M	FILL, silty SAND, Rubbish	
83 @ 0.15M	3/07/2017	M17-JI02391	552701	0.15 M	FILL, silty SAND	
83 @ 0.50M	3/07/2017	M17-JI02392	552701	0.50 M	FILL, silty SAND	
83 @ 1.00M	3/07/2017	M17-JI02393	552701	1.00 M	FILL, silty SAND	
84 @ 0.15M	3/07/2017	M17-JI02399	552701	0.15 M	FILL, silty SAND	
84 @ 0.50M	3/07/2017	M17-JI02400	552701	0.50 M	FILL, silty SAND	
85 @ 0.15M	3/07/2017	M17-JI02401	552701	0.15 M	FILL, silty SAND	
85 @ 0.50M	3/07/2017	M17-JI02402	552701	0.50 M	FILL, silty SAND	
DUPLICATE 1	3/07/2017	M17-JI02205	552701	1.00 M	FILL, sandy CLAY, Rubbish	
DUPLICATE 2	3/07/2017	M17-JI02238	552701	0.50 M	FILL, silty SAND	
DUPLICATE 4	3/07/2017	M17-JI02267	552701	0.50 M	FILL, sandy CLAY	
DUPLICATE 5	3/07/2017	M17-JI02315	552701	2.00 M	FILL, silty SAND, Rubbish	
DUPLICATE 6	3/07/2017	M17-JI02316	552701	1.00 M	FILL, silty SAND, Rubbish	
DUPLICATE 7	3/07/2017	M17-JI02317	552701	1.50 M	FILL, sandy CLAY	
DUPLICATE 8	3/07/2017	M17-JI02346	552701	0.50 M	FILL, silty SAND	
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish	
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND	
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish	
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY	
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish	
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish	
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY	

Guideline categories: NEPM 2013 Table 1A(1) HILs Rec C Soil through Csat (Clay) – Human health; NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space through NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil 0-2m – Maintenance of (highly modified) ecosystems.

			Herbicides							Inorganics					Lead	MAH				
Field ID	Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid	Hedonal	Atrazine	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Cyanide (Free)	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil	120		800	1300	400		800	800	800	240					600					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space												450			1100					
ANZECC 1992														<6 and >8						
US EPA ECO-SSL																				
CSQG Residential/Parkland Use																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
0-2m																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																				
0-2m																				
63 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	9.5	-	53	-	-	-	-	<0.6
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	7.4	-	65	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	29	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	7	-	34	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	15	-	45	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	8.8	-	73	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	10	-	32	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	24	-	100	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	17	-	48	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	20	-	57	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	13	-	36	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	8.1	-	8.2	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	5.5	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	6.1	-	11	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	18	-	-	-	-	-
68 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	35	-	-	-	-	<0.6
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	9.8	-	36	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	9.9	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	49	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	6.3	-	46	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	10	-	43	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	10	-	41	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	6.2	-	47	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	12	-	49	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	34	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	76	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	28	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	66	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	4.3	-	52	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	42	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	15	-	32	-	-	-	-	-
73 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	16	-	34	-	-	-	-	<0.6
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	20	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	34	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	9.8	-	16	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	11	-	41	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	39	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	15	-	40	-	-	-	-	-
75 @ 1.50M	<1	-	<0.5	<0.5	<0.2	-	<0.5	<0.5	<0.5	<5	-	-	7.8	-	47	-	-	-	-	-
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	14	-	160	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	28	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	52	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	380	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	6.3	-	39	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	10	-	19	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	6.6	-	56	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	5.4	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	4	-	85	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	44	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	5.4	-	33	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	92	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	5.3	-	84	-	-	-	-	-
82 @ 2.00M	<1	<1	-	-	-	<20	-	-	-	-	<5	<100	5.7	8.2	35	<0.5	<0.5	<0.5	<0.5	<1.1
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	74	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	4.3	-	41	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	4.6	-	43	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	65	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	14	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	22	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	43	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	25	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-	-	11	-	72	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-	-	16	-	8	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-	-	8.3	-	13	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-	-	11	-	43	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-	-	12	-	99	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	93	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	50	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-	-	16.6	-	58	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	11	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-	-	29.1	-	90	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	18	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-	-	10.8	-	24	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-	-	9	-	65	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-	-	11	-	57	-	-	-	-	-

	Metals															
Field ID	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	20000	90	300		300	17000	19000	80		1200	700			30000
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																
0-1m																
1-2m																
2-4m																
Csat																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																
0-1m																
1-2m																
2-4m																
Csat																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																
0-1m																
1-2m																
2-4m																
Csat																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	100					410		220				270	10			730
ANZECC 1992															50	
US EPA ECO-SSL					130						6.6					
CSQG Residential/Parkland Use				10												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																
0-2m																
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																
0-2m																
63 @ 1.50M	4	-	-	<0.4	-	7.6	-	13	-	<0.1	-	10	-	-	-	64
63 @ 3.00M	7.5	-	-	<0.4	-	21	-	21	-	0.4	<5	14	<2	<0.2	<10	95
64 @ 0.50M	2.7	-	-	<0.4	-	6.4	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	36
64 @ 1.00M	3.2	-	-	<0.4	-	6.9	-	9.2	-	0.1	<5	6	<2	<0.2	<10	50
64 @ 2.50M	2.8	-	-	<0.4	-	18	-	15	-	0.4	<5	7.1	<2	<0.2	16	66
65 @ 0.15M	4.5	-	-	<0.4	-	9.5	-	47	-	<0.1	<5	7.4	<2	<0.2	<10	170
65 @ 1.00M	3.9	-	-	<0.4	-	6.3	-	14	-	<0.1	<5	17	<2	<0.2	73	58
65 @ 2.00M	3.9	-	-	<0.4	-	8.3	-	38	-	6.6	<5	<5	<2	<0.2	<10	130
65 @ 2.50M	5.8	-	-	<0.4	-	14	-	30	-	0.2	<5	17	<2	<0.2	25	120
65 @ 3.00M	5	-	-	<0.4	-	12	-	32	-	1.9	<5	9.2	2.2	0.2	35	120
66 @ 1.50M	19	-	-	<0.4	-	27	-	7	-	<0.1	<5	9.2	<2	<0.2	<10	63
67 @ 0.15M	3.3	-	-	<0.4	-	11	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	16
67 @ 0.50M	3.9	-	-	<0.4	-	13	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5
68 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	18
68 @ 0.50M	4.7	-	-	<0.4	-	17	-	10	-	<0.1	<5	23	<2	<0.2	<10	24
68 @ 1.50M	5.1	-	-	<0.4	-	9.2	-	28	-	0.1	-	6.9	-	-	-	62
68 @ 2.00M	5.2	-	-	<0.4	-	9.6	-	26	-	0.1	<5	11	<2	<0.2	<10	220
69 @ 0.50M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	20
69 @ 1.00M	5.9	-	-	<0.4	-	19	-	15	-	<0.1	<5	13	<2	<0.2	<10	88
69 @ 2.00M	7	-	-	<0.4	-	14	-	15	-	0.1	<5	14	<2	<0.2	14	79
69 @ 2.50M	12	-	-	<0.4	-	15	-	11	-	<0.1	<5	13	<2	<0.2	34	120
69 @ 3.00M	7.4	-	-	<0.4	-	16	-	15	-	<0.1	<5	14	2.1	<0.2	44	110
70 @ 0.15M	20	-	-	<0.4	-	24	-	11	-	0.2	<5	13	<2	<0.2	<10	66
70 @ 0.50M	20	-	-	<0.4	-	41	-	13	-	<0.1	<5	16	<2	<0.2	<10	71
70 @ 1.50M	16	-	-	<0.4	-	11	-	6.3	-	<0.1	<5	6.2	<2	<0.2	16	380
70 @ 3.00M	13	-	-	0.5	-	15	-	55	-	<0.1	<5	9.5	<2	<0.2	<10	170
71 @ 2.50M	6.8	-	-	<0.4	-	12	-	26	-	1.5	<5	27	<2	<0.2	<10	71
72 @ 0.15M	5.9	-	-	0.5	-	17	-	26	-	<0.1	<5	28	<2	<0.2	<10	93
72 @ 0.50M	4.1	-	-	<0.4	-	12	-	16	-	<0.1	<5	25	<2	<0.2	<10	110
73 @ 0.50M	11	-	-	<0.4	-	24	-	23	-	<0.1	<5	20	<2	<0.2	<10	87
73 @ 1.00M	9.7	-	-	<0.4	-	28	-	11	-	0.1	<5	14	<2	<0.2	<10	45
73 @ 1.50M	14	-	-	<0.4	-	34	-	12	-	<0.1	-	13	-	-	-	59
73 @ 3.00M	3.9	-	-	<0.4	-	24	-	19	-	<0.1	<5	32	<2	<0.2	<10	36
74 @ 0.15M	4.7	-	-	<0.4	-	11	-	17	-	5.3	<5	13	<2	<0.2	<10	62
74 @ 0.50M	4.2	-	-	<0.4	-	15	-	6.8	-	0.2	<5	8.4	<2	<0.2	<10	29
74 @ 3.00M	10	-	-	<0.4	-	16	-	15	-	0.2	<5	11	<2	<0.2	<10	58
75 @ 0.15M	5.8	-	-	<0.4	-	12	-	8.1	-	0.5	<5	6.7	<2	<0.2	<10	65
75 @ 0.50M	15	-	-	<0.4	-	31	-	5.2	-	<0.1	<5	13	<2	<0.2	<10	62
75 @ 1.50M	12	<2	<10	<0.4	<1	14	<5	11	42	0.1	-	8.1	<2	-	-	51
75 @ 2.00M	7.8	-	-	<0.4	-	11	-	11	-	<0.1	<5	6.8	<2	<0.2	16	150
75 @ 2.50M	2.5	-	-	<0.4	-	<5	-	14	-	<0.1	<5	<5	<2	<0.2	13	49
76 @ 2.50M	15	-	-	<0.4	-	16	-	14	-	<0.1	<5	16	<2	<0.2	<10	91
77 @ 3.00M	7.9	-	-	2.8	-	34	-	100	-	0.2	<5	17	<2	<0.2	28	1900
78 @ 0.15M	6.4	-	-	<0.4	-	10	-	47	-	5.7	<5	5.8	<2	<0.2	<10	59
78 @ 0.50M	7.9	-	-	<0.4	-	27	-	15	-	1.6	<5	9.2	<2	<0.2	<10	27
79 @ 1.00M	8.1	-	-	<0.4	-	16	-	11	-	<0.1	<5	14	<2	<0.2	<10	97
79 @ 3.00M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	18
80 @ 0.15M	2.5	-	-	<0.4	-	<5	-	10	-	<0.1	<5	5.2	<2	<0.2	<10	87
80 @ 0.50M	4.3	-	-	<0.4	-	9.2	-	24	-	<0.1	<5	6	<2	<0.2	<10	84
81 @ 0.15M	3.9	-	-	<0.4	-	7.2	-	9.8	-	<0.1	<5	<5	<2	<0.2	<10	69
82 @ 0.15M	4.3	-	-	<0.4	-	10	-	17	-	<0.1	<5	7.1	<2	<0.2	<10	150
82 @ 0.50M	3.6	-	-	<0.4	-	9.7	-	16	-	<0.1	<5	11	<2	<0.2	<10	200
82 @ 2.00M	8.7	-	-	<0.4	<1	12	-	8.6	-	<0.1	<5	9.9	<2	<0.2	<10	51
82 @ 3.00M	6	-	-	0.4	-	9.4	-	22	-	<0.1	<5	12	<2	<0.2	13	180
83 @ 0.15M	2.9	-	-	<0.4	-	7.1	-	14	-	<0.1	<5	8.2	<2	<0.2	<10	86
83 @ 0.50M	2.5	-	-	<0.4	-	5.7	-	11	-	<0.1	<5	6.7	<2	<0.2	<10	71
83 @ 1.00M	<2	-	-	<0.4	-	20	-	37	-	<0.1	<5	26	<2	<0.2	<10	200
84 @ 0.15M	<2	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	23
84 @ 0.50M	<2	-	-	<0.4	-	<5	-	8.3	-	<0.1	<5	<5	<2	<0.2	<10	45
85 @ 0.15M	5.8	-	-	<0.4	-	22	-	23	-	<0.1	<5	19	<2	<0.2	<10	110
85 @ 0.50M	2.4	-	-	<0.4	-	<5	-	<5	-	<0.1	<5	<5	<2	<0.2	<10	40
DUPLICATE 1	6.4	-	-	<0.4	-	14	-	30	-	1.3	<5	11	<2	0.3	36	92
DUPLICATE 2	<2	-	-	<0.4	-	<5	-	6.3	-	3.3	<5	<5	<2	<0.2	<10	68
DUPLICATE 4	2.8	-	-	<0.4	-	13	-	8.4	-	<0.1	<5	7.8	<2	<0.2	<10	21
DUPLICATE 5	4.9	-	-	<0.4	-	8.5	-	32	-	<0.1	<5	11	<2	<0.2	<10	73
DUPLICATE 6	13	-	-	2	-	28	-	97	-	0.6	<5	23	<2	4.1	320	390
DUPLICATE 7	7.6	-	-	<0.4	-	23	-	15	-	<0.1	<5	13	<2	<0.2	<10	93
DUPLICATE 8	5	-	-	<0.4	-	14	-	21	-	<0.1	<5	7.7	<2	<0.2	<10	78
SPLIT 1	6	-	-	<1	-	10	-	58	-	0.6	4	8	<5	<2	40	105
SPLIT 2	<5	-	-	<1	-	5	-	7	-	5	<2	2	<5	<2	<5	28
SPLIT 3	5	-	-	3	-	17	-	53	-	0.2	2	17	<5	111	<5	391
SPLIT 4	<5	-	-	<1	-	14	-	8	-	<0.1	<2	13	<5	<2	<5	35
SPLIT 5	<5	-	-	<1	-	6	-	8	-	<0.1	<2	5	<5	<2	<5	27
SPLIT 6	8	-	-	1	-	21	-	59	-	0.5	<2	16	<5	4	213	127
SPLIT 7	<5	-	-	<1	-	15	-	10	-	<0.1	<2	8	<5	<2	<5	52

	Organic			Organochlorine Pesticides													
Field ID	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																	
ANZECC 1992																	
US EPA ECO-SSL																	
CSQG Residential/Parkland Use																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil		1300	5600														
0-2m																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m		300	2800														
63 @ 1.50M	<50	360	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	<50	120	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	<50	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	-	-	-	<0.05	-	<0.05	<0.1	-	<0.1	-	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
75 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
82 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

	Pentachlorophenol	tetrachlorophenols	2,4,5-Trichlorophenoxy Acetic Acid (Herbicides)	Hedonal (Herbicides)	Atrazine (Herbicides)	Dinoseb (Herbicides)	2-Methyl-4-chlorophenoxyacetic acid (Herbicides)	2-Methyl-4-Chlorophenoxy Butanoic Acid (Herbicides)	Mecoprop (Herbicides)	Cyanide (Free) (Inorganics)	Cyanide Total (Inorganics)	Fluoride (Inorganics)	Moisture Content (dried @ 103°C) (Inorganics)	pH (aqueous extract) (Inorganics)	Lead (Lead)	1,2,4-trimethylbenzene (MAH)	1,3,5-trimethylbenzene (MAH)	Isopropylbenzene (MAH)	Styrene (MAH)	Monocylic aromatic hydrocarbons EPAVic (MAH)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	1	1	0.5	0.5	0.2	20	0.5	0.5	0.5	5	5	100	1	0.1	5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil (Human health)	120		800	1300	400		800	800	800	240					600					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space (Maintenance of (highly modified) ecosystems.)												450			1100					
ANZECC 1992														<6 and >8						
US EPA ECO-SSL																				
CSQG Residential/Parkland Use																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
0-2m																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																				
0-2m																				
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	41	-	-	-	-	-
Statistical Summary																				
Number of Results	11	9	2	2	2	9	2	2	2	2	8	8	226	8	225	8	8	8	8	15
Minimum Concentration	<1	<1	<0.5	<0.5	<0.2	<20	<0.5	<0.5	<0.5	<5	<5	<100	1.2	7.3	<5	<0.5	<0.5	<0.5	<0.5	<0.6
Maximum Concentration	<1	<1	<0.5	<0.5	<0.2	<20	<0.5	<0.5	<0.5	<5	<5	260	35	8.8	7200	<0.5	<0.5	<0.5	<0.5	2.2
Average Concentration	0.5	0.5				10					2.5	84	9.1	7.9	95	0.25	0.25	0.25	0.25	0.56
Median Concentration	0.5	0.5	0.25	0.25	0.1	10	0.25	0.25	0.25	2.5	2.5	50	8.4	7.8	43	0.25	0.25	0.25	0.25	0.55
Standard Deviation	0	0				0					0	74	5.2	0.51	485	0	0	0	0	0.47
Geometric Standard Deviation												1.8	1.8	1.1	2.6					1.7
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL															236.2					
95% ProUCL – 95% Student's-t UCL																				

	Arsenic (Metals)	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	2	10	0.4	1	2	5	5	5	0.1	2	2	2	0.2	5	5
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	20000	90	300		300	17000	19000	80		1200	700			30000
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																
0-1m																
1-2m																
2-4m																
Csat																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																
0-1m																
1-2m																
2-4m																
Csat																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																
0-1m																
1-2m																
2-4m																
Csat																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	100					410		220				270	10			730
ANZECC 1992															50	
US EPA ECO-SSL					130						6.6					
CSQG Residential/Parkland Use				10												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																
0-2m																
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																
0-2m																
SPLIT 8	<5	-	-	<1	-	9	-	20	-	0.1	<2	5	<5	<2	<5	56
Statistical Summary																
Number of Results	225	2	2	225	10	225	2	225	2	225	217	225	219	217	217	225
Minimum Concentration	<2	<2	<10	<0.4	<1	<5	<5	<5	42	<0.1	<2	2	<2	<0.2	<5	<5
Maximum Concentration	110	<2	<10	14	<1	110	<5	170000	100	6.6	<100	300	<20	111	790	120000
Average Concentration	6.8			0.35	0.5	14		774		0.29	2.7	12	1.1	0.96	21	668
Median Concentration	4.7	1	5	0.2	0.5	11	2.5	12	71	0.05	2.5	9.6	1	0.1	5	64
Standard Deviation	11			0.98	0	11		11332		0.88	3.2	21	0.71	7.9	75	8003
Geometric Standard Deviation	2.5			1.7		2.2		3.1	1.8	3	1.3	2.3	1.3	2.7	2.6	3
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL	10.22							4068				18.68			47.1	2994
95% ProUCL – 95% Student's-t UCL				0.644												

	TRH >C10-C16 (Organic)	TRH >C16-C34 (Organic)	TRH >C34-C40 (Organic)	4,4-DDE (Organochlorine Pesticides)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate
	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	50	100	100	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(1) HILs Rec C Soil							10		70				400				
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	3800	5300	7400														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																	
ANZECC 1992																	
US EPA ECO-SSL																	
CSQG Residential/Parkland Use																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil		1300	5600														
0-2m																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m		300	2800														
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																	
Number of Results	15	15	15	10	8	10	10	8	10	8	10	10	10	10	10	10	10
Minimum Concentration	<50	<100	<100	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
Maximum Concentration	98	970	240	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05
Average Concentration	30	229	66	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.075	0.025	0.025	0.025	0.025
Median Concentration	25	50	50	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.075	0.025	0.025	0.025	0.025
Standard Deviation	19	297	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation	1.4	3	1.5														
95% ProUCL – 95% Chebyshev (Mean, Sd) UCL		570.5															
95% ProUCL – 95% Student's-t UCL																	

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

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															Organophosphorous Pesticides	PAH			PAH/Phenols																												Pesticides	Phenolics			Polychlorinated Biphenyls						
							Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo[b+j]fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health						20				10		400	30	250			3																								300		40000	5700		20										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																									1900																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									9																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.																																								170																
ANZECC 1992																																																									
US EPA ECO-SSL																																										18															
CSQG Residential/Parkland Use																																												3.8													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																									
0-2m																															0.7																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																									
0-2m																															0.7																										
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																			
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	0.6	0.9	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	0.5	<0.5	1.181	0.6	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	-	0.7	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-Jl02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-Jl02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-Jl02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-Jl02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-Jl02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-Jl02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-Jl02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-Jl02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-Jl02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-Jl02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-Jl02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-Jl02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-Jl02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-Jl02390	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	-	-	-	-	-	-	-
21 @ 0.15M	3/07/2017	M17-Jl02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-Jl02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-Jl02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-Jl02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-Jl02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-Jl02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-Jl02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-Jl02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-Jl02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-Jl02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-Jl02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-Jl02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-Jl02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-Jl02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-Jl02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-Jl02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-Jl02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-Jl02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-Jl02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-Jl02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-Jl02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-Jl02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-Jl02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-Jl02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-Jl02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-Jl02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-Jl02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-Jl02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-Jl02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-Jl02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-Jl02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-Jl02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-Jl02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-Jl02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-Jl02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-Jl02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-Jl02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-Jl02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

																Organophosphorous Pesticides	PAH			PAH/Phenols																												Pesticides	Phenolics			Polychlorinated Biphenyls						
							Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo[b+j]fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil							20				10		400	30	250			3																								300		40000	5700		20										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																									1900																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									9																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																									
0-1m						Human health																																			NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																									170																
ANZECC 1992																																																									
US EPA ECO-SSL																																										18															
CSQG Residential/Parkland Use						Maintenance of (highly modified) ecosystems.																																						3.8													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																									
0-2m																																0.7																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																									
0-2m																																0.7																									
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																			
38 @ 0.50M	3/07/2017	M17-Jl02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-Jl02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-Jl02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-Jl02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-Jl02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-Jl02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-Jl02254	552701	1.50 M	FILL, silty SAND, Rubbish		<0.05	-	-	-	<0.05	-	<0.05	<1	<0.2	<0.5	0.6	1.2	-	-	<0.2	-	<0.4	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	1.126	0.5	<0.5	<0.5	0.6	3.2	0.8	<0.5	<2.5	0.7	<0.05	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
40 @ 3.00M	3/07/2017	M17-Jl02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-Jl02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-Jl02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-Jl02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-Jl02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-Jl02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-Jl02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-Jl02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-Jl02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-Jl02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-Jl02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-Jl02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-Jl02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-Jl02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-Jl02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-Jl02220	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	1.2	1.4	1.7	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.7	0.9	0.7	0.6	0.7	0.7	<0.5	2.614	1.3	<0.5	0.5	<2 - 1.1	8	0.7	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-
47 @ 3.00M	3/07/2017	M17-Jl02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-Jl02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-Jl02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-Jl02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-Jl02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-Jl02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-Jl02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-Jl02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-Jl02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-Jl02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	0.6	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	-	0.7	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
51 @ 3.00M	3/07/2017	M17-Jl02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-Jl02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-Jl02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-Jl02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-Jl02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-Jl02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-Jl02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-Jl02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-Jl02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-Jl02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-Jl02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-Jl02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-Jl02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5 - 0.6	0.6	<0.5	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
54 @ 3.00M	3/07/2017	M17-Jl02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-Jl02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-Jl02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-Jl02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-Jl02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-Jl02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-Jl02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-Jl02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-Jl02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-Jl02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-Jl02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-Jl02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-Jl02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-Jl02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-Jl02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-Jl02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-Jl02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-Jl02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-Jl02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-Jl02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-Jl02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-Jl02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-Jl02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-Jl02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-Jl02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-Jl02199	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.15M	3/07/2017	M17-Jl02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-Jl02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-Jl02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

															Organophosphorous Pesticides	PAH			PAH/Phenols																												Pesticides	Phenolics			Polychlorinated Biphenyls						
							Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo[b+j]fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil							20				10		400	30	250			3																								300		40000	5700		20										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																									1900																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																																									
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									9																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																																								
0-1m				Human health																																					NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																																								
0-1m																																									NL																
1-2m																																									NL																
2-4m																																									NL																
Csat																																									10																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																									170																
ANZECC 1992																																																									
US EPA ECO-SSL																																										18															
CSQG Residential/Parkland Use																																												3.8													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil				Maintenance of (highly modified) ecosystems.																																																					
0-2m																															0.7																										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																																									
0-2m																															0.7																										
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																																			
63 @ 1.50M	3/07/2017	M17-Jl02212	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
63 @ 3.00M	3/07/2017	M17-Jl02214	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	3/07/2017	M17-Jl02303	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	3/07/2017	M17-Jl02304	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	3/07/2017	M17-Jl02305	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	3/07/2017	M17-Jl02285	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	3/07/2017	M17-Jl02286	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	3/07/2017	M17-Jl02287	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	3/07/2017	M17-Jl02288	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	3/07/2017	M17-Jl02289	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	3/07/2017	M17-Jl02370	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	3/07/2017	M17-Jl02268	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	3/07/2017	M17-Jl02269	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	3/07/2017	M17-Jl02193	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	3/07/2017	M17-Jl02194	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	3/07/2017	M17-Jl02195	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	1.7	2	2.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	1.1	1.3	1.2	1.2	1.3	1.1	<0.5	4.848	1.9	<0.5	0.8	<0.5	12.8	1	-	-	1.9	-	-	-	-	-	-	-	-	-	-	-
68 @ 2.00M	3/07/2017	M17-Jl02196	552701	2.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	3/07/2017	M17-Jl02297	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	3/07/2017	M17-Jl02298	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	3/07/2017	M17-Jl02299	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	3/07/2017	M17-Jl02300	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	3/07/2017	M17-Jl02301	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	3/07/2017	M17-Jl02328	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	3/07/2017	M17-Jl02329	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	3/07/2017	M17-Jl02330	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	3/07/2017	M17-Jl02331	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	3/07/2017	M17-Jl02377	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	3/07/2017	M17-Jl02256	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	3/07/2017	M17-Jl02257	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	3/07/2017	M17-Jl02189	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	3/07/2017	M17-Jl02190	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	3/07/2017	M17-Jl02191	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
73 @ 3.00M	3/07/2017	M17-Jl02192	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	3/07/2017	M17-Jl02206	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	3/07/2017	M17-Jl02207	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	3/07/2017	M17-Jl02208	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	3/07/2017	M17-Jl02291	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	3/07/2017	M17-Jl02292	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	3/07/2017	M17-Jl02293	552701	1.50 M	FILL, silty SAND, Rubbish		<0.05	-	-	-	<0.05	-	<0.05	<1	<0.2	<0.5	0.6	1.2	-	-	<0.2	-	<0.4	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	0.6	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	0.6	<0.05	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
75 @ 2.00M	3/07/2017	M17-Jl02294	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	3/07/2017	M17-Jl02295	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	3/07/2017	M17-Jl02290	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	3/07/2017	M17-Jl02403	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	3/07/2017	M17-Jl02375	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	3/07/2017	M17-Jl02376	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	3/07/2017	M17-Jl02373	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	3/07/2017	M17-Jl02374	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	3/07/2017	M17-Jl02371	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	3/07/2017	M17-Jl02372	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	3/07/2017	M17-Jl02398	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	3/07/2017	M17-Jl02394	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	3/07/2017	M17-Jl02395	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	3/07/2017	M17-Jl02396	552701	2.00 M	FILL, silty SAND, Rubbish		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
82 @ 3.00M	3/07/2017	M17-Jl02397	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	3/07/2017	M17-Jl02391	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	3/07/2017	M17-Jl02392	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	3/07/2017	M17-Jl02393	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	3/07/2017	M17-Jl02399	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	3/07/2017	M17-Jl02400	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	3/07/2017	M17-Jl02401	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	3/07/2017	M17-Jl02402	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	3/07/2017	M17-Jl02205	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	3/07/2017	M17-Jl02238	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	3/07/2017	M17-Jl02267	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	3/07/2017	M17-Jl02315	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	3/07/2017	M17-Jl02316	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	3/07/2017	M17-Jl02317	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	3/07/2017	M17-Jl02346	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Geoaquitards Environmental

	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Chlorpyrifos	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol
									Organophosphorous Pesticides	PAH			PAH/Phenols				
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.5	0.5	0.5	0.5	5	0.2	1	0.4
NEPM 2013 Table 1A(1) HILs Rec C Soil (Human health)	**20**				**10**		**400**	**30**	**250**			**3**					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space (Maintenance of (highly modified) ecosystems)																	
ANZECC 1992																	
US EPA ECO-SSL																	
CSQG Residential/Parkland Use																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																	
0-2m																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m																	
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																	
Number of Results	10	8	8	8	10	8	10	10	2	17	17	17	9	9	11	9	11
Minimum Concentration	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4
Maximum Concentration	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	1.7	2	2.2	<0.5	<5	<0.2	<1	<0.4
Average Concentration	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5		0.41	0.75	1.3	0.25	2.5	0.1	0.5	0.2
Median Concentration	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.1	0.25	0.6	1.2	0.25	2.5	0.1	0.5	0.2
Standard Deviation	0	0	0	0	0	0	0	0		0.41	0.38	0.26	0	0	0	0	0
Geometric Standard Deviation										1.8	1.4	1.2					
95% ProUCL 95% Chebyshev (Mean, Sd) UCL																	
95% Student's-t UCL																	

	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo[b+j]fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil (Human health)																	
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m																	
1-2m																	
2-4m																	
Csat																	
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space (Maintenance of (highly modified) ecosystems)																	
ANZECC 1992																	
US EPA ECO-SSL																	
CSQG Residential/Parkland Use																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																	
0-2m								0.7									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m								0.7									
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																	
Number of Results	9	9	9	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Minimum Concentration	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.126	<0.5	<0.5	<0.5
Maximum Concentration	<5	<1	<5	<0.5	<0.5	<0.5	1.1	1.3	1.2	1.2	1.3	1.1	<0.5	4.848	1.9	<0.5	0.8
Average Concentration	2.5	0.5	2.5	0.25	0.25	0.25	0.33	0.36	0.33	0.33	0.36	0.34	0.25	1.4	0.49	0.25	0.3
Median Concentration	2.5	0.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.107	0.25	0.25	0.25
Standard Deviation	0	0	0	0	0	0	0.23	0.29	0.25	0.24	0.28	0.23	0	0.96	0.46	0	0.14
Geometric Standard Deviation							1.5	1.7	1.6	1.5	1.6	1.6		1.5	1.9		1.4
95% ProUCL 95% Chebyshev (Mean, Sd) UCL																	
95% Student's-t UCL								0.66									

	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Mirex	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
							Pesticides	Phenolics			Polychlorinated Biphenyls						
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.01	20	1	20	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil (Human health)		**300**		**40000**	**5700**		**20**										
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	**1900**																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m	**NL**																
1-2m	**NL**																
2-4m	**NL**																
Csat	**9**																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m	**NL**																
1-2m	**NL**																
2-4m	**NL**																
Csat	**10**																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m	**NL**																
1-2m	**NL**																
2-4m	**NL**																
Csat	**10**																
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space (Maintenance of (highly modified) ecosystems)	170																
ANZECC 1992																	
US EPA ECO-SSL		18															
CSQG Residential/Parkland Use				3.8													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																	
0-2m																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m																	
SPLIT 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																	
Number of Results	17	17	17	11	2	17	2	9	9	9	10	10	10	10	10	10	10
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Maximum Concentration	1.1	12.8	1	<0.5	<2.5	1.9	<0.05	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Average Concentration	0.33	1.9	0.35	0.25		0.52		10	0.5	10	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Median Concentration	0.25	0.25	0.25	0.25	0.75	0.25	0.025	10	0.5	10	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Standard Deviation	0.21	3.4	0.24	0		0.45		0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation	1.5	3.8	1.6		3.1	1.9											
95% ProUCL 95% Chebyshev (Mean, Sd) UCL																	
95% Student's-t UCL																	

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND	

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

								Solvents						TPH								VOCs
								PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	Ethylbenzene plus BTEX (C6-C10)	Naphthalene (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil								1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																					5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																						
ANZECC 1992																						
US EPA ECO-SSL																						
CSOG Residential/Parkland Use								1 1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil														180	120							
0-2m																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																						
0-2m														180	120							
Human health																						
Maintenance of (highly modified) ecosystems.																						
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																
1 AT 0.50M	27/02/2017	M17-Fe28348	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 1.50M	27/02/2017	M17-Fe28349	535906	1.50 M	FILL, sandy CLAY		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
1 AT 2.0M	27/02/2017	M17-Fe28350	535906	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.0M	27/02/2017	M17-Fe28351	535906	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 AT 3.50M	27/02/2017	M17-Fe28352	535906	3.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 0.15M	27/02/2017	M17-Fe28369	535906	0.15 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
10 AT 0.50M	27/02/2017	M17-Fe28370	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 AT 1.0M	27/02/2017	M17-Fe28371	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 0.15M	27/02/2017	M17-Fe28372	535906	0.15 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
11 AT 1.0M	27/02/2017	M17-Fe28373	535906	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 AT 1.50M	27/02/2017	M17-Fe28374	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 AT 1.0M	27/02/2017	M17-Fe28353	535906	1.00 M	FILL, sandy CLAY	Round 1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	95	110	205	<20	<2
2 AT 1.50M	27/02/2017	M17-Fe28354	535906	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 AT 0.50M	27/02/2017	M17-Fe28356	535906	0.50 M	FILL, SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 AT 0.15M	27/02/2017	M17-Fe28357	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 AT 1.50M	27/02/2017	M17-Fe28359	535906	1.50 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	22	160	<50	182	<20	<2
6 AT 1.0M	27/02/2017	M17-Fe28361	535906	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 0.50M	27/02/2017	M17-Fe28363	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 AT 1.0M	27/02/2017	M17-Fe28364	535906	1.00 M	FILL, silty SAND		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
8 AT 0.50M	27/02/2017	M17-Fe28365	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 AT 1.50M	27/02/2017	M17-Fe28366	535906	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.15M	27/02/2017	M17-Fe28367	535906	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 AT 0.50M	27/02/2017	M17-Fe28368	535906	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 @ 0.15M	3/07/2017	M17-JI02378	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.15M	3/07/2017	M17-JI02379	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 0.50M	3/07/2017	M17-JI02380	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.15M	3/07/2017	M17-JI02411	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 @ 0.50M	3/07/2017	M17-JI02412	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.15M	3/07/2017	M17-JI02413	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 @ 0.50M	3/07/2017	M17-JI02414	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.15M	3/07/2017	M17-JI02422	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 0.50M	3/07/2017	M17-JI02423	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.15M	3/07/2017	M17-JI02415	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 @ 0.50M	3/07/2017	M17-JI02416	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.15M	3/07/2017	M17-JI02388	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 0.50M	3/07/2017	M17-JI02389	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 @ 1.50M	3/07/2017	M17-JI02390	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
21 @ 0.15M	3/07/2017	M17-JI02383	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.15M	3/07/2017	M17-JI02385	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 0.50M	3/07/2017	M17-JI02386	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 0.15M	3/07/2017	M17-JI02426	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 2.50M	3/07/2017	M17-JI02427	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 @ 3.00M	3/07/2017	M17-JI02428	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.15M	3/07/2017	M17-JI02417	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 @ 0.50M	3/07/2017	M17-JI02418	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.15M	3/07/2017	M17-JI02409	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 @ 0.50M	3/07/2017	M17-JI02410	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 @ 0.15M	3/07/2017	M17-JI02404	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.15M	3/07/2017	M17-JI02338	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 0.50M	3/07/2017	M17-JI02339	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.15M	3/07/2017	M17-JI02335	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 0.50M	3/07/2017	M17-JI02336	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 @ 2.50M	3/07/2017	M17-JI02337	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.15M	3/07/2017	M17-JI02234	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 0.50M	3/07/2017	M17-JI02235	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 @ 3.00M	3/07/2017	M17-JI02237	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.15M	3/07/2017	M17-JI02230	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 0.50M	3/07/2017	M17-JI02231	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 @ 3.00M	3/07/2017	M17-JI02233	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.15M	3/07/2017	M17-JI02244	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 0.50M	3/07/2017	M17-JI02245	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 @ 3.00M	3/07/2017	M17-JI02247	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.15M	3/07/2017	M17-JI02248	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 0.50M	3/07/2017	M17-JI02249	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 1.50M	3/07/2017	M17-JI02250	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 @ 3.00M	3/07/2017	M17-JI02252	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 @ 2.50M	3/07/2017	M17-JI02353	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.15M	3/07/2017	M17-JI02347	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 0.50M	3/07/2017	M17-JI02348	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.15M	3/07/2017	M17-JI02341	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 0.50M	3/07/2017	M17-JI02342	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.15M	3/07/2017	M17-JI02332	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 0.50M	3/07/2017	M17-JI02333	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37 @ 2.50M	3/07/2017	M17-JI02334	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 @ 0.15M	3/07/2017	M17-JI02227	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

				Solvents						TPH								VOCs
				PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	Ft. minus BTEX (C6-C10)	f2-Naphth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil				1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																	5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																		
0-1m										NL	NL							
1-2m										NL	NL							
2-4m										NL	NL							
Csat										950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																		
0-1m										NL	NL							
1-2m										NL	NL							
2-4m										NL	NL							
Csat										910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																		
0-1m										NL	NL							
1-2m										NL	NL							
2-4m										NL	NL							
Csat										850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																		
ANZECC 1992																		
US EPA ECO-SSL																		
CSOG Residential/Parkland Use				1.1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										180	120							
0-2m																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
0-2m										180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**												
38 @ 0.50M	3/07/2017	M17-JI02228	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.15M	3/07/2017	M17-JI02239	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 0.50M	3/07/2017	M17-JI02240	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 1.00M	3/07/2017	M17-JI02241	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39 @ 2.50M	3/07/2017	M17-JI02243	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 0.15M	3/07/2017	M17-JI02253	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 1.50M	3/07/2017	M17-JI02254	552701	1.50 M	FILL, silty SAND, Rubbish		<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
40 @ 3.00M	3/07/2017	M17-JI02255	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.15M	3/07/2017	M17-JI02354	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 0.50M	3/07/2017	M17-JI02355	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
41 @ 1.00M	3/07/2017	M17-JI02356	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 0.15M	3/07/2017	M17-JI02360	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 2.50M	3/07/2017	M17-JI02361	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 @ 3.00M	3/07/2017	M17-JI02362	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 1.50M	3/07/2017	M17-JI02319	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.15M	3/07/2017	M17-JI02264	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 0.50M	3/07/2017	M17-JI02265	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45 @ 3.00M	3/07/2017	M17-JI02266	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 0.15M	3/07/2017	M17-JI02223	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 1.00M	3/07/2017	M17-JI02224	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 @ 3.00M	3/07/2017	M17-JI02226	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 0.15M	3/07/2017	M17-JI02219	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 @ 1.50M	3/07/2017	M17-JI02220	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	97	<20	73	520	430	1023	<20	-
47 @ 3.00M	3/07/2017	M17-JI02222	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 0.15M	3/07/2017	M17-JI02310	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 1.50M	3/07/2017	M17-JI02311	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 2.00M	3/07/2017	M17-JI02312	552701	2.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 @ 3.00M	3/07/2017	M17-JI02314	552701	3.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.15M	3/07/2017	M17-JI02357	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 0.50M	3/07/2017	M17-JI02358	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 @ 2.00M	3/07/2017	M17-JI02359	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 1.50M	3/07/2017	M17-JI02323	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 @ 2.50M	3/07/2017	M17-JI02324	552701	2.50 M	FILL, clayey SAND, Rubbish		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
51 @ 3.00M	3/07/2017	M17-JI02325	552701	3.00 M	FILL, clayey SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.15M	3/07/2017	M17-JI02274	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 0.50M	3/07/2017	M17-JI02275	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 1.00M	3/07/2017	M17-JI02276	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 2.50M	3/07/2017	M17-JI02277	552701	2.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 @ 3.00M	3/07/2017	M17-JI02278	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.15M	3/07/2017	M17-JI02261	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 0.50M	3/07/2017	M17-JI02262	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 @ 1.00M	3/07/2017	M17-JI02263	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.15M	3/07/2017	M17-JI02200	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 0.50M	3/07/2017	M17-JI02201	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 1.00M	3/07/2017	M17-JI02202	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 @ 2.50M	3/07/2017	M17-JI02203	552701	2.50 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	<20	<50	<20	<20	670	300	970	<20	-
54 @ 3.00M	3/07/2017	M17-JI02204	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 0.50M	3/07/2017	M17-JI02215	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 2.50M	3/07/2017	M17-JI02217	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55 @ 3.00M	3/07/2017	M17-JI02218	552701	3.00 M	FILL, silty SAND, Rubbish	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.15M	3/07/2017	M17-JI02306	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 0.50M	3/07/2017	M17-JI02307	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 2.00M	3/07/2017	M17-JI02308	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 @ 3.00M	3/07/2017	M17-JI02309	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.15M	3/07/2017	M17-JI02281	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 0.50M	3/07/2017	M17-JI02282	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 1.00M	3/07/2017	M17-JI02283	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57 @ 2.50M	3/07/2017	M17-JI02284	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.15M	3/07/2017	M17-JI02366	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 0.50M	3/07/2017	M17-JI02367	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 1.00M	3/07/2017	M17-JI02368	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 0.15M	3/07/2017	M17-JI02326	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59 @ 2.50M	3/07/2017	M17-JI02327	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.15M	3/07/2017	M17-JI02271	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 0.50M	3/07/2017	M17-JI02272	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 @ 3.00M	3/07/2017	M17-JI02273	552701	3.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.15M	3/07/2017	M17-JI02258	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 0.50M	3/07/2017	M17-JI02259	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61 @ 3.00M	3/07/2017	M17-JI02260	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.15M	3/07/2017	M17-JI02197	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 0.50M	3/07/2017	M17-JI02198	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62 @ 1.50M	3/07/2017	M17-JI02199	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	<50	<20	<20	280	94	374	<20	-
63 @ 0.15M	3/07/2017	M17-JI02209	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 0.50M	3/07/2017	M17-JI02210	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 @ 1.00M	3/07/2017	M17-JI02211	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			Solvents						TPH									VOCs
			PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	F1 minus BTEX (C6-C10)	F2 -Naptth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil			1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																	
0-1m									NL	NL							
1-2m									NL	NL							
2-4m									NL	NL							
Csat									950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																	
0-1m									NL	NL							
1-2m									NL	NL							
2-4m									NL	NL							
Csat									910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																	
0-1m									NL	NL							
1-2m									NL	NL							
2-4m									NL	NL							
Csat									850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																	
ANZECC 1992																	
US EPA ECO-SSL																	
CSOG Residential/Parkland Use			1.1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									180	120							
0-2m																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m									180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**											
63 @ 1.50M	3/07/2017	M17-JI02212	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	<20	<50	<20	<20	200	200	400	<20	-
63 @ 3.00M	3/07/2017	M17-JI02214	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 0.50M	3/07/2017	M17-JI02303	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 1.00M	3/07/2017	M17-JI02304	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64 @ 2.50M	3/07/2017	M17-JI02305	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 0.15M	3/07/2017	M17-JI02285	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 1.00M	3/07/2017	M17-JI02286	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.00M	3/07/2017	M17-JI02287	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 2.50M	3/07/2017	M17-JI02288	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65 @ 3.00M	3/07/2017	M17-JI02289	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 @ 1.50M	3/07/2017	M17-JI02370	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.15M	3/07/2017	M17-JI02268	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67 @ 0.50M	3/07/2017	M17-JI02269	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.15M	3/07/2017	M17-JI02193	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 0.50M	3/07/2017	M17-JI02194	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 @ 1.50M	3/07/2017	M17-JI02195	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	<20	<50	<20	<20	74	53	127	<20	-
68 @ 2.00M	3/07/2017	M17-JI02196	552701	2.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 0.50M	3/07/2017	M17-JI02297	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 1.00M	3/07/2017	M17-JI02298	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.00M	3/07/2017	M17-JI02299	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 2.50M	3/07/2017	M17-JI02300	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 @ 3.00M	3/07/2017	M17-JI02301	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.15M	3/07/2017	M17-JI02328	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 0.50M	3/07/2017	M17-JI02329	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 1.50M	3/07/2017	M17-JI02330	552701	1.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 @ 3.00M	3/07/2017	M17-JI02331	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 @ 2.50M	3/07/2017	M17-JI02377	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.15M	3/07/2017	M17-JI02256	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72 @ 0.50M	3/07/2017	M17-JI02257	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 0.50M	3/07/2017	M17-JI02189	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.00M	3/07/2017	M17-JI02190	552701	1.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 @ 1.50M	3/07/2017	M17-JI02191	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
73 @ 3.00M	3/07/2017	M17-JI02192	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.15M	3/07/2017	M17-JI02206	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 0.50M	3/07/2017	M17-JI02207	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 @ 3.00M	3/07/2017	M17-JI02208	552701	3.00 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.15M	3/07/2017	M17-JI02291	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 0.50M	3/07/2017	M17-JI02292	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 1.50M	3/07/2017	M17-JI02293	552701	1.50 M	FILL, silty SAND, Rubbish		<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.00M	3/07/2017	M17-JI02294	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75 @ 2.50M	3/07/2017	M17-JI02295	552701	2.50 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76 @ 2.50M	3/07/2017	M17-JI02290	552701	2.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77 @ 3.00M	3/07/2017	M17-JI02403	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.15M	3/07/2017	M17-JI02375	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 @ 0.50M	3/07/2017	M17-JI02376	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 1.00M	3/07/2017	M17-JI02373	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 @ 3.00M	3/07/2017	M17-JI02374	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.15M	3/07/2017	M17-JI02371	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 @ 0.50M	3/07/2017	M17-JI02372	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 @ 0.15M	3/07/2017	M17-JI02398	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.15M	3/07/2017	M17-JI02394	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 0.50M	3/07/2017	M17-JI02395	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 @ 2.00M	3/07/2017	M17-JI02396	552701	2.00 M	FILL, silty SAND, Rubbish		<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
82 @ 3.00M	3/07/2017	M17-JI02397	552701	3.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.15M	3/07/2017	M17-JI02391	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 0.50M	3/07/2017	M17-JI02392	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 @ 1.00M	3/07/2017	M17-JI02393	552701	1.00 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.15M	3/07/2017	M17-JI02399	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 @ 0.50M	3/07/2017	M17-JI02400	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.15M	3/07/2017	M17-JI02401	552701	0.15 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85 @ 0.50M	3/07/2017	M17-JI02402	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 1	3/07/2017	M17-JI02205	552701	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 2	3/07/2017	M17-JI02238	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 4	3/07/2017	M17-JI02267	552701	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 5	3/07/2017	M17-JI02315	552701	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 6	3/07/2017	M17-JI02316	552701	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 7	3/07/2017	M17-JI02317	552701	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUPLICATE 8	3/07/2017	M17-JI02346	552701	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 1	3/07/2017	EM1708657001	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 2	3/07/2017	EM1708657002	EM1708657	0.50 M	FILL, silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 3	3/07/2017	EM1708657003	EM1708657	1.00 M	FILL, sandy CLAY, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 4	3/07/2017	EM1708657004	EM1708657	0.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 5	3/07/2017	EM1708657005	EM1708657	2.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 6	3/07/2017	EM1708657006	EM1708657	1.00 M	FILL, silty SAND, Rubbish		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT 7	3/07/2017	EM1708657007	EM1708657	1.50 M	FILL, sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								Solvents						TPH								VOCs
								PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2- pentanone	Acetone	Allyl chloride	Carbon disulfide	F1 minus BTEX (C6-C10)	F2 -Naptth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil								1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																					5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																						
0-1m														NL	NL							
1-2m														NL	NL							
2-4m														NL	NL							
Csat														850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																						
ANZECC 1992																						
US EPA ECO-SSL																						
CSOG Residential/Parkland Use								1 1														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil														180	120							
0-2m																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																						
0-2m														180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**																
SPLIT 8	3/07/2017	EM1708657008	EM1708657	0.50 M	FILL, silty SAND			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																						
Number of Results								10	8	8	8	8	8	15	15	15	15	15	15	15	15	8
Minimum Concentration								<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Maximum Concentration								<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	97	<20	73	670	430	1023	<20	<2
Average Concentration								0.05	0.25	0.25	0.25	0.25	0.25	10	30	10	15	147	94	232	10	1
Median Concentration								0.05	0.25	0.25	0.25	0.25	0.25	10	25	10	10	25	25	25	10	1
Standard Deviation								0	0	0	0	0	0	0	19	0	16	200	123	335	0	0
Geometric Standard Deviation															1.4		1.7	3.4	2.8	4.3		
95% ProUCL	95% Chebyshev (Mean, Sd) UCL																					
	95% Student's-t UCL																					

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be
Prescribed Industrial Wastes (PIWs)

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Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds	Heavy Metal	OCP		BTEX					
							Iron (%)	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
							%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.01			0.1	0.1	0.1	0.2	0.1	0.3
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space										**120**	**5300**	**18000**			**15000**
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand															
0-1m										**NL**	**NL**	**NL**			**NL**
1-2m										**NL**	**NL**	**NL**			**NL**
2-4m										**NL**	**NL**	**NL**			**NL**
Csat										**360**	**64**	**560**			**300**
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt															
0-1m										**NL**	**NL**	**NL**			**NL**
1-2m										**NL**	**NL**	**NL**			**NL**
2-4m										**NL**	**NL**	**NL**			**NL**
Csat										**440**	**69**	**640**			**330**
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay															
0-1m										**NL**	**NL**	**NL**			**NL**
1-2m										**NL**	**NL**	**NL**			**NL**
2-4m										**NL**	**NL**	**NL**			**NL**
Csat										**430**	**68**	**630**			**330**
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.														
ANZECC 1992															
US EPA ECO-SSL															
CSQG Residential/Parkland Use															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										65		105			
0-2m											125				45
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil															
0-2m										50	70	85			105
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**									
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND	Round 2	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		-	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		1.2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		0.92	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		-	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Statistical Summary															
Number of Results							2	2	2	7	7	7	7	7	7
Minimum Concentration							0.92	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Maximum Concentration							1.2	<1	<0.75	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Average Concentration										0.05	0.05	0.05	0.1	0.05	0.15
Median Concentration							1.06	0.5	0.375	0.05	0.05	0.05	0.1	0.05	0.15
Standard Deviation										0	0	0	0	0	0
Geometric Standard Deviation							1.2								

Field ID	Chlorinated Hydrocarbons																												
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons EPAVic
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	
NEPM 2013 Table 1A(1) HILs Rec C Soil																													
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																													
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																													
0-1m																													
1-2m																													
2-4m																													
Csat																													
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																													
0-1m																													
1-2m																													
2-4m																													
Csat																													
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																													
0-1m																													
1-2m																													
2-4m																													
Csat																													
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																													
ANZECC 1992																													
US EPA ECO-SSL																													
CSQG Residential/Parkland Use				5																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																													
0-2m																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																													
0-2m																													
Field ID																													
4 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
16 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 2.50M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
Statistical Summary																													
Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<8
Average Concentration																													
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4
Standard Deviation																													
Geometric Standard Deviation																													

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

								Halogenated Benzenes								Halogenated Hydrocarbons				
							Other chlorinated hydrocarbons EPAVic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Rec C Soil															10					
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																				
0-1m	Human health																			
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																				
0-1m																				
1-2m																				
2-4m																				
Csat																				
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																				
ANZECC 1992																				
US EPA ECO-SSL																				
CSQG Residential/Parkland Use	Maintenance of (highly modified) ecosystems.																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
0-2m																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																				
0-2m																				
Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds														
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Statistical Summary																				
Number of Results							2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum Concentration							<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Concentration							<7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Average Concentration																				
Median Concentration							3.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.025	0.25	0.25	0.25	0.25	0.25
Standard Deviation																				
Geometric Standard Deviation																				

	Halogenated Phenols							Herbicides	Inorganic
Field ID	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols	Dinoseb	% Clay
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL	1	1	0.5	0.5	0.5	1	1	20	1
NEPM 2013 Table 1A(1) HILs Rec C Soil						120			
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space									
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand									
0-1m									
1-2m									
2-4m									
Csat									
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt									
0-1m									
1-2m									
2-4m									
Csat									
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay									
0-1m									
1-2m									
2-4m									
Csat									
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space									
ANZECC 1992									
US EPA ECO-SSL									
CSQG Residential/Parkland Use									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									
0-2m									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil									
0-2m									
4 AT 1.50M	-	-	-	-	-	-	-	-	-
13 @ 2.00M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	-
13 @ 3.00M	-	-	-	-	-	-	-	-	-
16 @ 2.50M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	-
16 @ 3.00M	-	-	-	-	-	-	-	-	-
18 @ 0.15M	-	-	-	-	-	-	-	-	-
18 @ 0.50M	-	-	-	-	-	-	-	-	-
19 @ 0.15M	-	-	-	-	-	-	-	-	-
19 @ 0.50M	-	-	-	-	-	-	-	-	-
21 @ 2.50M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	-
22 @ 3.00M	-	-	-	-	-	-	-	-	-
23 @ 0.15M	-	-	-	-	-	-	-	-	-
23 @ 0.50M	-	-	-	-	-	-	-	-	-
23 @ 2.50M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	23
28 @ 2.50M	-	-	-	-	-	-	-	-	-
35 @ 1.50M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	-
35 @ 2.00M	-	-	-	-	-	-	-	-	-
35 @ 2.50M	-	-	-	-	-	-	-	-	-
35 @ 3.00M	-	-	-	-	-	-	-	-	-
36 @ 2.00M	-	-	-	-	-	-	-	-	-
36 @ 2.50M	-	-	-	-	-	-	-	-	-
36 @ 3.00M	-	-	-	-	-	-	-	-	-
43 @ 2.00M	-	-	-	-	-	-	-	-	-
43 @ 3.00M	-	-	-	-	-	-	-	-	-
50 @ 1.00M	-	-	-	-	-	-	-	-	6.3
50 @ 2.50M	-	-	-	-	-	-	-	-	-
50 @ 3.00M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	-
58 @ 2.50M	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	-
Statistical Summary									
Number of Results	7	7	7	7	7	7	7	7	2
Minimum Concentration	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	6.3
Maximum Concentration	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	23
Average Concentration	0.5	0.5	0.25	0.25	0.25	0.5	0.5	10	
Median Concentration	0.5	0.5	0.25	0.25	0.25	0.5	0.5	10	14.65
Standard Deviation	0	0	0	0	0	0	0	0	
Geometric Standard Deviation									2.5

	Inorganics							Lead	MAH					
Field ID	Cyanide Total	Fluoride	Moisture Content (dried @ 103°C)	Cation Exchange Capacity	Total Organic Carbon	pH (aqueous extract)	pH (Lab)	Lead	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Monocylic aromatic hydrocarbons EPAVic	Arsenic
	mg/kg	mg/kg	%			pH_Units	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	100	1			0.1	0.1	5	0.5	0.5	0.5	0.5		2
NEPM 2013 Table 1A(1) HILs Rec C Soil								600						300
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand														
0-1m														
1-2m														
2-4m														
Csat														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt														
0-1m														
1-2m														
2-4m														
Csat														
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay														
0-1m														
1-2m														
2-4m														
Csat														
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space		450						1100						100
ANZECC 1992						<6 and >8								
US EPA ECO-SSL														
CSQG Residential/Parkland Use														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil														
0-2m														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil														
0-2m														
4 AT 1.50M	-	-	10	-	-	-	-	10	-	-	-	-	-	5.4
13 @ 2.00M	-	-	7	-	-	-	-	-	-	-	-	-	<0.6	-
13 @ 3.00M	-	-	4.8	-	-	-	-	5.6	-	-	-	-	-	<2
16 @ 2.50M	<5	<100	3.7	-	-	7.2	-	26	<0.5	<0.5	<0.5	<0.5	<1.1	<2
16 @ 3.00M	-	-	6	-	-	-	-	15	-	-	-	-	-	<2
18 @ 0.15M	-	-	2.7	-	-	-	-	27	-	-	-	-	-	<2
18 @ 0.50M	-	-	1.1	-	-	-	-	<5	-	-	-	-	-	<2
19 @ 0.15M	-	-	5	-	-	-	-	<5	-	-	-	-	-	<2
19 @ 0.50M	-	-	3.7	-	-	-	-	<5	-	-	-	-	-	<2
21 @ 2.50M	-	-	7.4	-	-	-	-	-	-	-	-	-	<0.6	-
22 @ 3.00M	-	-	17	-	-	-	-	6	-	-	-	-	-	2.7
23 @ 0.15M	-	-	4.7	-	-	-	-	5.7	-	-	-	-	-	<2
23 @ 0.50M	-	-	4.3	-	-	-	-	15	-	-	-	-	-	<2
23 @ 2.50M	-	-	14	14	0.2	-	7.2	-	-	-	-	-	<0.6	-
28 @ 2.50M	-	-	9.3	-	-	-	-	<5	-	-	-	-	-	<2
35 @ 1.50M	-	-	8.1	-	-	-	-	-	-	-	-	-	<0.6	-
35 @ 2.00M	-	-	5.6	-	-	-	-	<5	-	-	-	-	-	<2
35 @ 2.50M	-	-	6.5	-	-	-	-	<5	-	-	-	-	-	<2
35 @ 3.00M	-	-	12	-	-	-	-	<5	-	-	-	-	-	<2
36 @ 2.00M	-	-	8.1	-	-	-	-	<5	-	-	-	-	-	<2
36 @ 2.50M	-	-	11	-	-	-	-	<5	-	-	-	-	-	<2
36 @ 3.00M	-	-	15	-	-	-	-	9.2	-	-	-	-	-	<2
43 @ 2.00M	-	-	3	-	-	-	-	38	-	-	-	-	-	2.7
43 @ 3.00M	-	-	3	-	-	-	-	36	-	-	-	-	-	2.4
50 @ 1.00M	-	-	5	25	1.4	-	7.7	-	-	-	-	-	-	-
50 @ 2.50M	-	-	11	-	-	-	-	7.6	-	-	-	-	-	2.3
50 @ 3.00M	-	-	9.1	-	-	-	-	-	-	-	-	-	<0.6	-
58 @ 2.50M	<5	<100	5.7	-	-	7.2	-	<5	<0.5	<0.5	<0.5	<0.5	<1.1	<2
Statistical Summary														
Number of Results	2	2	28	2	2	2	2	22	2	2	2	2	7	22
Minimum Concentration	<5	<100	1.1	14	0.2	7.2	7.2	<5	<0.5	<0.5	<0.5	<0.5	<0.6	<2
Maximum Concentration	<5	<100	17	25	1.4	7.2	7.7	38	<0.5	<0.5	<0.5	<0.5	<1.1	5.4
Average Concentration			7.3					10					0.37	1.5
Median Concentration	2.5	50	6.25	19.5	0.8	7.2	7.45	5.65	0.25	0.25	0.25	0.25	0.3	1
Standard Deviation			4					11					0.12	1.1
Geometric Standard Deviation			1.8	1.5	4		1	2.7					1.3	1.6

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

Assessment criteria – Metals and Organic (TRH)

	Purpose	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Copper	Iron	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40
		Metals												Organic		
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG
EQL		0.4	1	2	5	20	0.1	2	2	2	0.2	5	5	50	100	100
NEPM 2013 Table 1A(1) HILs Rec C Soil	Human health	**90**	**300**		**17000**		**80**		**1200**	**700**			**30000**			
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space	Human health													**3800**	**5300**	**7400**
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand	Human health															
0-1m	Human health															
1-2m	Human health															
2-4m	Human health															
Csat	Human health															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt	Human health															
0-1m	Human health															
1-2m	Human health															
2-4m	Human health															
Csat	Human health															
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay	Human health															
0-1m	Human health															
1-2m	Human health															
2-4m	Human health															
Csat	Human health															
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space	Maintenance of (highly modified) ecosystems.			410	220				270	10			730			
ANZECC 1992	Maintenance of (highly modified) ecosystems.											50				
US EPA ECO-SSL	Maintenance of (highly modified) ecosystems.		130					6.6								
CSQG Residential/Parkland Use	Maintenance of (highly modified) ecosystems.	10														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil	Maintenance of (highly modified) ecosystems.														1300	5600
0-2m	Maintenance of (highly modified) ecosystems.															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	Maintenance of (highly modified) ecosystems.															
0-2m	Maintenance of (highly modified) ecosystems.														300	2800

Assessment criteria – Organochlorine Pesticides

	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
NEPM 2013 Table 1A(1) HILs Rec C Soil				**10**		**70**				**400**					**20**				**10**		**400**	**30**

Sample results – Metals and Organic (TRH)

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Copper	Iron	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	<0.4	-	27	<5	-	<0.1	<5	9.2	<2	<0.2	<10	9.6	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND	Round 2	<0.4	-	7.2	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND	Round 2	<0.4	<1	6.4	8.7	-	<0.1	<5	<5	<2	<0.2	<10	20	<50	<100	<100
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND	Round 2	<0.4	-	15	<5	-	<0.1	<5	<5	<2	<0.2	<10	11	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND	Round 2	<0.4	-	<5	<5	-	0.2	<5	<5	<2	<0.2	<10	12	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND	Round 2	<0.4	-	15	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND	Round 2	<0.4	-	<5	5.3	-	<0.1	<5	5.6	<2	<0.2	<10	14	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND	Round 2	<0.4	-	<5	6.6	-	<0.1	<5	5.9	<2	<0.2	<10	18	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY	Round 2	-	-	-	-	12,000	-	-	-	-	-	-	-	<50	<100	<100
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	6.5	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	9.9	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND	Round 2	<0.4	-	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	<5	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY	Round 2	<0.4	-	19	<5	-	<0.1	<5	6.5	<2	<0.2	<10	6.9	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND	Round 2	0.4	-	6.3	13	-	<0.1	<5	16	<2	<0.2	<10	450	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY	Round 2	<0.4	-	<5	17	-	<0.1	<5	7.5	<2	<0.2	<10	200	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND	Round 2	-	-	-	-	9200	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY	Round 2	<0.4	-	8.5	<5	-	<0.1	<5	<5	<2	<0.2	<10	5.8	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100	<100
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND	Round 2	<0.4	<1	<5	<5	-	<0.1	<5	<5	<2	<0.2	<10	9.9	<50	<100	<100
Statistical Summary																					
Number of Results							22	2	22	22	2	22	22	22	22	22	22	22	7	7	7
Minimum Concentration							<0.4	<1	<5	<5	9200	<0.1	<5	<5	<2	<0.2	<10	<5	<50	<100	<100
Maximum Concentration							0.4	<1	27	17	12000	0.2	<5	16	<2	<0.2	<10	450	<50	<100	<100
Average Concentration							0.21		6.3	4.2		0.057	2.5	4.1	1	0.1	5	36	25	50	50
Median Concentration							0.2	0.5	2.5	2.5	10600	0.05	2.5	2.5	1	0.1	5	6.7	25	50	50
Standard Deviation							0.043		6.7	3.9		0.032	0	3.3	0	0	0	101	0	0	0
Geometric Standard Deviation							1.2		2.3	1.8	1.2	1.3		1.7				4.1			

Sample results – Organochlorine Pesticides

Field ID	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
4 AT 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
16 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 @ 2.50M	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Statistical Summary																						
Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Minimum Concentration	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Maximum Concentration	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Average Concentration																						
Median Concentration	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.075	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5
Standard Deviation																						
Geometric Standard Deviation																						

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

							PAH			PAH/Phenols																						Phenolics			Polychlorinated Biph				
							Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo(b+j)fluoranthene	Dibenz(a,h)anthracene	Carcinogenic PAHs IARC (Course Soil Calc)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Pyrene	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248
							MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	1	20	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil									3																								300		40000								
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																																1900										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																									
0-1m																																NL										
1-2m																																NL										
2-4m																																NL										
Csat																																9										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt																																									
0-1m																																NL										
1-2m																																NL										
2-4m																																NL										
Csat																																10										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																																									
0-1m																																NL										
1-2m																																NL										
2-4m																																NL										
Csat																																10										
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																																170										
ANZECC 1992																																									
US EPA ECO-SSL																																	18									
CSQG Residential/Parkland Use																																			3.8							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																									
0-2m																							0.7																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																									
0-2m																							0.7																			

Field ID	Sampled Date	SampleCode	Lab Report Number	Sampling Depth	Lithological Description	Sampling Rounds																																					
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	-	-	-	-	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
Statistical Summary																																										
Number of Results							7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	2	2	2	2	2
Minimum Concentration							<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
Maximum Concentration							<0.5	0.6	1.2	<0.5	<5	<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.214	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<0.1	<0.1	<0.1	<0.1	<0.1
Average Concentration							0.25	0.6	1.2	0.25	2.5	0.1	0.5	0.2	2.5	0.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	10	0.5	10					
Median Concentration							0.25	0.6	1.2	0.25	2.5	0.1	0.5	0.2	2.5	0.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.107	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	10	0.5	10	0.05	0.05	0.05	0.05	0.05
Standard Deviation							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Geometric Standard Deviation																																										

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

Geoaquitards Environmental

							enyls			Solvents					TPH								VOCs
							Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	F1 minus BTEX (C6-C10)	F2-Napth (C10-C16)	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	Trihalomethanes
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.5	20	50	20	20	50	50	50	20	
NEPM 2013 Table 1A(1) HILs Rec C Soil									1														
CRC Care Table 4 Soil Direct Contact - HSL-C Recreational / Open Space																						5100	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																							
0-1m															NL	NL							
1-2m															NL	NL							
2-4m															NL	NL							
Csat															950	560							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Silt	Human health																						
0-1m															NL	NL							
1-2m															NL	NL							
2-4m															NL	NL							
Csat															910	570							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																							
0-1m															NL	NL							
1-2m															NL	NL							
2-4m															NL	NL							
Csat															850	560							
NEPM 2013 Ecological Investigation Level Urban Residence/Public Open Space																							
ANZECC 1992																							
US EPA ECO-SSL																							
CSQG Residential/Parkland Use	Maintenance of (highly modified) ecosystems.								1.3														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil															180	120							
0-2m																							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																							
0-2m															180	120							
Field ID	**Sampled Date**	**SampleCode**	**Lab Report Number**	**Sampling Depth**	**Lithological Description**	**Sampling Rounds**																	
4 AT 1.50M	27/02/2017	M17-Fe28358	535906	1.50 M	silty CLAY	Round 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 @ 2.00M	3/07/2017	M17-JI02381	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
13 @ 3.00M	3/07/2017	M17-JI02382	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16 @ 2.50M	3/07/2017	M17-JI02424	552701	2.50 M	clayey SAND		<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
16 @ 3.00M	3/07/2017	M17-JI02425	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.15M	3/07/2017	M17-JI02407	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 @ 0.50M	3/07/2017	M17-JI02408	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.15M	3/07/2017	M17-JI02405	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 @ 0.50M	3/07/2017	M17-JI02406	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 @ 2.50M	3/07/2017	M17-JI02384	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
22 @ 3.00M	3/07/2017	M17-JI02387	552701	3.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.15M	3/07/2017	M17-JI02419	552701	0.15 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 0.50M	3/07/2017	M17-JI02420	552701	0.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23 @ 2.50M	3/07/2017	M17-JI02421	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
28 @ 2.50M	3/07/2017	M17-JI02340	552701	2.50 M	clayey SAND	Round 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 1.50M	3/07/2017	M17-JI02349	552701	1.50 M	silty SAND		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
35 @ 2.00M	3/07/2017	M17-JI02350	552701	2.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 2.50M	3/07/2017	M17-JI02351	552701	2.50 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 @ 3.00M	3/07/2017	M17-JI02352	552701	3.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.00M	3/07/2017	M17-JI02343	552701	2.00 M	sily SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 2.50M	3/07/2017	M17-JI02344	552701	2.50 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36 @ 3.00M	3/07/2017	M17-JI02345	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 2.00M	3/07/2017	M17-JI02320	552701	2.00 M	clayey SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 @ 3.00M	3/07/2017	M17-JI02321	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 1.00M	3/07/2017	M17-JI02363	552701	1.00 M	silty SAND		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 2.50M	3/07/2017	M17-JI02364	552701	2.50 M	sandy CLAY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50 @ 3.00M	3/07/2017	M17-JI02365	552701	3.00 M	sandy CLAY		-	-	-	-	-	-	-	-	<20	<50	<20	<20	<50	<50	<50	<20	-
58 @ 2.50M	3/07/2017	M17-JI02369	552701	2.50 M	silty SAND		<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Statistical Summary																							
Number of Results							2	2	2	2	2	2	2	2	7	7	7	7	7	7	7	7	2
Minimum Concentration							<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Maximum Concentration							<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<20	<20	<50	<50	<50	<20	<2
Average Concentration															10	25	10	10	25	25	25	10	
Median Concentration							0.05	0.05	0.05	0.25	0.25	0.25	0.25	0.25	10	25	10	10	25	25	25	10	1
Standard Deviation															0	0	0	0	0	0	0	0	
Geometric Standard Deviation																							

Note:
** Soils With a pH value of 4 or less or a pH of 9 or more are considered to be Prescribed Industrial Wastes (PIWs)

MICHAEL SMITH & ASSOCIATES

PROPOSED NETBALL COURTS

20 WANGARA ROAD

SANDRINGHAM

Report No: 119367

Date: 22 November, 2018

GEOTECHNICAL INVESTIGATION

By

A.S. JAMES PTY LIMITED
15 Libbett Avenue,
Clayton South Vic. 3169
Tel: 613 9547 4811
Fax: 613 9547 5393
E-mail: melb@asjames.com.au

THIS REPORT SHALL ONLY BE REPRODUCED IN FULL

A.S.JAMES PTY LTD
A.C.N. 004 584 534 A.B.N. 40 004 584 534
Geotechnical Engineers
SINCE 1963

15 Libbett Avenue
Clayton South Vic 3169
Tel: (613) 9547 4811
Fax: (613) 9547 5393
E-mail: melb@asjames.com.au

1. INTRODUCTION

1.01 **Investigation Requested By:** The geotechnical investigation was commissioned Mr Michael Smith of Michael Smith & Associates via email correspondence.

1.02 **Purpose of Investigation:** It is proposed to construct a netball facility at 20 Wangara Road, Sandringham. The site is understood to have previously been used as a quarry and later as a landfill for municipal waste. It is currently used as a golf driving range. Herein, it was required to forecast foundation conditions and recommend design parameters for the proposed structures and associated pavements.

At the time of preparing this report, it is anticipated that the proposed structures include an indoor netball facility, outdoor netball courts and associated car parks. It is also understood that a significant portion of the subject site is underlain by deep uncontrolled fill associated with the backfilling of a former quarry including the above ground placement of fill.

In the absence of any detailed structural drawings it has been assumed for the purpose of this report that no unusual loads or performance specifications apply.

Likely pile loads have been provided as up to 900 kN.

1.03 **Geology:** Other than the variable depths of fill known to be present in the immediate area, the 1:63,360 Geological Survey of Victoria, Ringwood Sheet indicates the subject site to be underlain by sedimentary deposits, which are of the Tertiary age and form part of the Brighton Group. Typically, these deposits comprise shallow surface sands and silt underlain by moderate strength clays, which grade to medium dense to dense clayey and silty sand. The Brighton Group often contains high strength cemented layers, which comprise ferruginous sandstone. These deposits extend to significant depths in the area.

The survey also indicates that Quaternary sand ridges and sand hill deposits are located within the subject site, however it is likely that these have been removed during previous quarrying activity.

The site is understood to have previously been used as a quarry and later as a landfill for municipal waste. It is therefore expected that deep fill will be encountered over most of the site.

1.04 **Field Methods:** As part of the geotechnical investigation the following field methods were incorporated:

i) **Auger Drilling:** The boreholes were drilled using truck mounted Terrington 6.0 and Gemco HP-7 drilling rigs as well as a Dingo K-9 drilling rig, all equipped with continuous flight 110 millimetre diameter augers fitted with tungsten carbide drill bits.

ii) **Standard Penetration Tests:** Standard penetration testing was conducted at regular intervals within the boreholes in accordance with the test procedure outlined in Australian Standard 1289, "Methods of Testing Soils For Engineering Purposes," Test Method 6.3.1, 2004.

iii) **Dynamic Cone Penetrometer Testing:** Dynamic cone penetrometer testing was conducted at selected borehole locations in accordance with the test procedure outlined in Australian Standard 1289, "Methods of Testing Soils For Engineering Purposes," Test Method 6.3.2, 1997.

iv) **Logging of Soil Profiles:** Soil profiles encountered in each of the boreholes were logged in accordance with Australian Standard AS 1726 - 2017, "Geotechnical Site Investigations."

2. RESULTS

2.01 **Site Description:** At the time of the site investigation the following site features were noted:

- The site is currently used as a golf driving range;
- The site exists at an elevated level due to the landfill, with the driving range sitting on the 'plateau';
- The height of the embankments appear to be approximately 3-4 metres at the northern sections north and 6-8 metres towards the south of the site;
- There are numerous existing medium to large trees bordering the site;
- Towards the south of the south there is a berm which the 'BH' boreholes are located on;
- The site has a moderate cover of grass;
- There is an existing café and golf facilities to the north of the site, as well as a minigolf course and associated car parking to the north-west.

2.02 **Borehole Drilling:** A series of twenty five (25) boreholes were drilled as part of the geotechnical investigation at the approximate locations indicated on Figure 1. The logs of the bores together with the results are given on Figures 2 - 26. The boreholes have been labelled as D1-10, S1-9 and BH1-6 where 'D' represents deep boreholes, 'S' represents shallow boreholes and 'BH1-6' represent the boreholes drilled around the borders of the site for permeability testing.

In BH1-6, slotted standpipes were installed in bores drilled into the fill for falling head permeability analyses.

2.03 **Sub-Surface Soil Profile:** The drilling program indicated the subject site to be underlain by a capping layer comprising of silty sand with gravels. The thickness of the capping layer ranged from 0.4 – 3.1 metres. Underlying the capping layer is fill comprising of silty sands, clayey sands and sandy clays all dark grey in colour. In this fill layer a variety of materials were observed including plastics, rags, metal scraps, tin cans, concrete, wire, brick fragments, glass and wood. The fill extended to depths below the existing surface level ranging from 5.5 to 8.5 metres. All 'S' boreholes were terminated within the fill. Within the 'BH' boreholes (located within the berm), the fill reached depths of 2.5-4.0 metres. Underlying the fill the profile generally revealed a layer of natural stiff sandy clay tending to dense clayey sand at depth. In boreholes D2 and D6 a thin layer (approximately 1 metre) of natural silty sand was encountered overlying the sandy clay. All deep boreholes were terminated within the dense clayey sand/stiff sandy clay at depths ranging between 12.0 to 15.0 metres.

A summary of the sub-soil profile from the boreholes can be seen in Table 1 below.

Borehole	**Fill (m)** Capping layer	**Fill (m)**	**Silty SAND (m)**	**Sandy CLAY (m)**	**Clayey SAND (m)**
D1	*0.0 – 0.6*	*0.6 – 7.6*	-	*7.6 – 9.6*	*9.6 – 12.0*
D2	*0.0 – 0.5*	*0.5 – 5.5*	*5.5 – 6.8*	*6.8 – 7.6*	*7.6 – 13.5*
D3	*0.0 – 0.6*	*0.6 – 8.0*	-	*8.0 – 11.0*	*11.0 – 12.5*
D4	*0.0 – 2.8*	*2.8 – 6.9*	-	*6.9 – 8.9*	*8.9 – 15.0*
D5	*0.0 – 3.1*	*3.1 – 7.0*	-	*7.0 – 8.2*	*8.2 – 12.0*
D6	*0.0 – 1.5*	*1.5 – 7.2*	*7.2 – 8.0*	*8.0 – 9.5*	*9.5 – 12.0*
D7	*0.0 – 1.5*	*1.5 – 6.8*	-	*6.8 – 7.7*	*7.7 – 13.5*
D8	*0.0 – 0.6*	*0.6 – 6.7*	-	*6.7 – 7.7*	*7.7 – 12.0*
D9	*0.0 – 0.4*	*0.4 – 8.5*	-	*8.5 – 12.0*	-

D10	*0.0 – 0.7*	*0.7 – 8.2*	-	*8.2 – 12.5*	-
BH1	*0.0 – 3.0*	-	-	-	-
BH2	*0.0 – 3.0*	-	-	*3.0 – 4.0*	-
BH3	*0.0 – 4.0*	-	-	-	-
BH4	*0.0 – 3.0*	-	-	-	*3.0 – 4.0*
BH5	*0.0 – 3.0*	-	-	-	*3.0 – 4.0*
BH6	*0.0 – 2.5*	-	*2.5 – 3.0*	-	*3.0 – 4.0*
S1	*0.0 – 3.0*	-	-	-	-
S2	*0.0 – 3.0*	-	-	-	-
S3	*0.0 – 1.1*	*1.1 – 2.5*	-	-	-
S4	*0.0 – 1.0*	*1.0 – 2.5*	-	-	-
S5	*0.0 – 0.7*	*0.7 – 2.5*	-	-	-
S6	*0.0 – 0.7*	*0.7 – 2.5*	-	-	-
S7	*0.0 – 1.2*	*1.2 – 2.5*	-	-	-
S8	*0.0 – 0.9*	*0.8 – 2.5*	-	-	-
S9	*0.0 – 1.7*	*1.7 – 2.5*	-	-	-

Table 1: Summary of Sub-Soil Profile

2.04 **Ground Water:** Groundwater was encountered in boreholes D1 and D4 at depths of 11.5 and 14.0 metres respectively. Perched water was also encountered within the fill in boreholes D1 and D10. It should also be noted that, during the winter and spring months, and following prolonged periods of rainfall the fill underlying the site is extremely susceptible to moisture ingress and can even form a temporary perched water table overlying clay lenses.

2.05 **Landfill Gas Analysis:** A landfill gas analysis is to be conducted at a later date. Typically almost all gas is produced within 20 years of placement, however small amounts may continue to be emitted for up to 50 years (Landfill Gas Primer, ATSDR, 2001). Due to a number of factors including low levels of organic/chemical waste encountered, the age of the landfill and the relatively permeable capping layer, we would not expect the results to be within harmful levels at this stage in the life of the landfill. This is to be confirmed by the landfill gas analysis.

2.06 **Permeability:** In-situ permeability testing was carried out within BH1-6 in accordance with BS 5930: 1999, "Code of Practice for Site Investigations" Section 25.4, to determine an average co-efficient of permeability. Ten (10) falling head permeability tests were conducted, to assess the permeability within surface soils and for soils at depth. This assessed by drilling two boreholes at each location, one to four metres in depth and another to two metres in depth. Due to the unstable nature of the fill, all boreholes collapsed to some extent. Accordingly the deep permeability

values should be interpreted as from 1.5 metres to 3.5 metres whereas the shallow permeability values should be interpreted as 0.5 metres to 1.5 metres. The deep boreholes at the locations of BH1 and BH5 had collapsed to an extent that would influence the results and were therefore not tested. No groundwater was encountered within any of the boreholes tested for permeability. To diminish the effect of soil suction all boreholes were saturated and allowed to settle prior to testing. The water level in the boreholes was measured initially after filling the bore with water, and at set time intervals thereafter. The permeability was able to be calculated using variable head test calculations after Hvorslev (1951).

Results of the falling head permeability testing carried out in boreholes BH1-6 are shown below:-

Location	**Permeability (m/s)**	**Location**	**Permeability (m/s)**
BH 1 *Shallow*	*$K = 7.23 \times 10^{-6}$ m/s*	***BH 1*** *Deep*	-
BH 2 *Shallow*	*$K = 2.62 \times 10^{-5}$ m/s*	***BH 2*** *Deep*	*$K = 1.34 \times 10^{-6}$ m/s*
BH 3 *Shallow*	*$K = 7.20 \times 10^{-6}$ m/s*	***BH 3*** *Deep*	*$K = 2.48 \times 10^{-6}$ m/s*
BH4 *Shallow*	*$K = 8.76 \times 10^{-6}$ m/s*	***BH4*** *Deep*	*$K = 2.23 \times 10^{-6}$ m/s*
BH5 *Shallow*	*$K = 6.29 \times 10^{-6}$ m/s*	***BH5*** *Deep*	-
BH6 *Shallow*	*$K = 8.80 \times 10^{-6}$ m/s*	***BH6*** *Deep*	*$K = 3.17 \times 10^{-6}$ m/s*

Taking into account the results of the permeability testing, we would recommend adopting a permeability of **7.66×10^{-6} m/s** for soils above 1.5 metres and **2.31×10^{-6} m/s** for soils below 1.5 metres.

Detailed calculations can be found in figures 36 – 45.

In considering the results of the in-situ falling head permeability testing, it should be noted that the method of testing is generally recognised to be accurate to one order of magnitude. It should also be noted that substantial variations in the permeability underlying the subject site are likely to attribute to the variations in the fill, and are highly unlikely to include either the maximum or minimum coefficients of permeability of the fill underlying the subject site.

3. RECOMMENDATIONS

3.1 BUILDING FOUNDATIONS.

3.1.1 **Piled Footings:** In view of the depth of the uncontrolled fill underlying over much of the subject site, the indoor netball court structure should be fully suspended structure on a series of piles.

Provided that adequate protection is provided against the potentially aggressive ground conditions, the use of either driven precast concrete piles or proprietary piles are recommended. Lighter screw piles and timber piles will have significant adverse construction issues.

3.1.2 **Pile Load Capacity:** The load carrying capacities of driven piles will be a combination of side adhesion and end-bearing within the stiff clay or dense clayey sand.

Piling contractors should make their own assessment of piling conditions and load carrying capacities of proprietary pile types, based on the information contained within this report.

From email correspondence with Dale Simpson of Perrett Simpson we understand that preliminary estimates of pile capacities are 650 to 700 kN for the outdoor netball courts and 750 to 900 kN for the indoor netball courts.

As a guide it is estimated that a 450 millimetre square precast concrete pile will achieve the requisite set of 700 kN for piles driven 9.5m below existing surface level founded in the dense sand for the outdoor courts. For the indoor courts it is estimated that the same pile will achieve the required set of 900 kN for piles driven 11.0 metres below existing surface level founded in the dense sand.

Some flexibility should also be introduced to accommodate for pile wastage and damage in fill

3.1.3 **Pile Settlements:** Differential settlements between adjacent piles are not expected to exceed 3 – 7 millimetres.

3.1.4 **Protection of Piles:** Due to the potential aggressive nature of the fill to steel and concrete, particularly at shallow depths, it will be necessary to provide an appropriate level of protection for the proposed precast concrete piles. Such protection should include the use of cement rich, high quality, very dense, impervious concrete, which should be placed with a high degree of vibration. As a guide the concrete should contain not less than 425 kg/m^3 cement and 50 kg/m^3 fly-ash placed with a super-plasticiser at a water cement ratio of 0.30. Care will also need to be taken to ensure that the steel segmental pile joints are not located within the uppermost 8 metres of the piles.

3.1.5 **Installation of Piles:** Due to the extent of the rubble content within the fill underlying the subject site, it is possible that some piles will refuse within the fill. This is not considered to represent a suitable founding stratum for the piles. Consequently, pre-boring of the piles through the fill is likely to be necessary over at least part of the subject site or pile wastage accepted.

3.1.6 **Pile Testing:** The use of a Pile Driver Analyser (PDA) or equivalent on a number of piles driven at the commencement of the piling contract should be used to establish driving and set criteria for subsequent piles.

3.1.7 **Shallow Footings:** Where differential movements are not critical in isolated structures such as light poles, it is considered feasible that shallow footings could be placed in adequately prepared fill. Due to the unpredictability of these founding layers they should be designed on a case by case basis. Further advice should be sought from this office if this is opted for.

3.1.8 **Earthquake Provisions:** In accordance with Australian Standard 1170.4-2007, Part 4, "Earthquake Actions in Australia", site sub-soil class of De – Deep or soft soil site and Hazard Factor (Z) of 0.09 should be adopted for the design of the proposed structure at the subject site.

3.2 PAVEMENT AND FLOOR SLAB CONSTRUCTION

3.2.1 **Preparation of Fill Subgrade:** It is considered feasible that the outdoor netball courts may be constructed on a floor slab (as opposed to fully suspended construction). Adequate site preparation is considered to be essential to the performance of a pavement, which is to be founded on fill.

In view of both the variable depth and density of the existing fill underlying the subject site, it is recommended that the existing fill be compacted using an appropriate impact roller. Herein advice should be sought from specialist impact roller operators with regard to the selection of an appropriate impact roller, which is matched to the type and depth of fill. Broms or Landpac should be considered.

Monitoring of settlements on the ground surface during the impact rolling will ultimately determine the number of passes applicable at the subject site, with impact rolling being continued until no appreciable surface settlements are observed.

Any areas of poor quality or saturated fill material identified during the impact rolling process should be excavated and replaced with good quality granular material.

Due to the potential disturbance of the near surface soils caused by the impact roller, it is likely to be necessary to compact the ground surface, upon the completion of the impact rolling, with a conventional heavy weight vibrating roller. Upon completion the fill should be compacted to a dry density not less than 98% of the maximum dry density value determined by the Standard Compaction Test in accordance with Australian Standard AS 1289 5.1.1 - 1993

Significant premiums can be gained by scheduling the preparation of the proposed subgrade during the drier months of the year. If work is carried out following prolonged rain periods it is possible that extensive areas of the subgrade may exist in an unstable condition due to the ingress of surface water.

Due to the age of the fill it is considered that instantaneous and primary settlement would have already occurred in the fill. Accordingly, secondary settlement has been estimated using Sowers Model (Sowers, 1973). **It is thought a reasonable estimate of likely total settlements following impact rolling would be still some 55 - 65 millimetres over the next 50 years with this being all differential settlements. If this settlement is unacceptable a piled approach should be adopted for all external courts.**

It may be necessary to monitor vibrations during impact rolling to ensure vibration waves do not transfer significantly into the any existing services or nearby structures as required. If there is concern to nearby structures or underground assets it may be necessary to construct a cut-off to a depth of

some 1.5 metres if sufficient buffers cannot be achieved. The distance impact rolling may effect structures may be as much as 50 – 70m.

3.2.2 **Pavements and Floor Slabs Constructed on Fill:** Ongoing settlements within the significant depths of fill underlying the subject site will result in distortion and maintenance requirements to pavements and floor slabs constructed on the existing ground surface level. Recognising this, any proposed pavements should be constructed on an adequately prepared subgrade with maximum possible grades to minimise future maintenance and ponding of water. Services should be sleeved and flexible and relative movement allowed between the structure and surrounding material.

Flexible pavements constructed on an adequately prepared fill subgrade may be designed using a Design CBR value of 2%. Rigid pavements on the other hand, constructed on a similar subgrade may be designed using a Modulus of Subgrade reaction value of 18 kPa/mm. Alternatively rigid pavements may be designed in accordance with the Cement and Concrete Association of Australia, 1997 publication, "Industrial Pavements - Guidelines for Design, Construction and Specification" using long and short term Young's Moduli of 14 and 20 MPa respectively.

The effects of movements on any proposed rigid pavements and floor slabs can be minimised by incorporation of positive load transfer devices such as dowels.

3.2.3 **Long Term Subgrade Moisture Control:** It is considered essential for the long term performance of any proposed pavements and floor slabs at the subject site that both an effective surface and perimeter cut-off drainage system be provided and maintained to reduce the risk of lateral moisture migration in the pavement and subgrade layers.

Preparation should be as outlined in section 3.2.1.

3.2.4 **Landfill Gas Collection Layer:** If the results of the landfill gas analysis reveal significant amount of methane gas, a gas collection layer should be implemented.

Such a layer should have the capacity to be “forced” if required and we have indicated the following detail being a combination of construction issues that should prove satisfactory.

At this site, there is no requirement for a clean fill layer however, the top of the gas collection layer should be relatively impermeable to gas migration. On this basis, we have proposed a

"Damtuff" proprietary HDPE liner, with on both sides a non-woven geo-textile sufficiently robust to protect the HDPE liner from the underlying screenings and the overlying cement stabilised crushed rock.

The preparation also allows for a non-woven geo-textile as a separation medium at subgrade level for the screenings layer.

On this basis, the composite construction could consist as follows.

- Floor slab
- 200mm layer 3% cement stabilized class 3 crushed rock 20mm maximum particle size
- Non-woven geo-textile 270 GSM (Dux 270 or equivalent proprietary product)
- 0.4mm HDPE plastic liner (Dam tough or equivalent proprietary product)
- Non-woven geo-textile 270 GSM (Dux 270 or equivalent proprietary product)
- 300mm screenings layer with gas collection pipes
- Non-woven geo-textile 270 GSM (Proprietary product Dux 270 GSM or equivalent)
- Prepared subgrade

A schematic of the proposed gas collection layer may be seen in figure 46 if this is eventually required.

3.2.5 **Fully Suspended Construction:** If the anticipated floor slab and pavement settlements cannot be tolerated it will be necessary to fully suspend the proposed pavements and floor slabs on a series of piles as detailed in Section 3.1.1.

3.3 CONSTRUCTION AND MAINTENANCE OF FOOTING SYSTEMS

3.3.1 **Articulation of Masonry Walls:** All brickwork and blockwork should be adequately articulated in accordance with the recommendations outlined by the Cement and Concrete Association of Australia in Technical Note 61, "Articulated Walling."

Articulation Spacings should not exceed the spacings recommended in Table 2 of Technical Note 61 unless structural design of the proposed structure is able to accommodate increased spacings. Articulation joints should also be provided at the transition points where more than one footing type is being used and at all points where the proposed extension connects to the existing structure.

3.3.2 **Site Drainage:** Water shall not be permitted to pond in footing excavations for any length of time. It is essential that no water be allowed to pond against any footings once they have been constructed.

The ground adjacent to the footings should be graded as soon as footing construction has been completed so as to provide a grade of at least 1 in 20 over the first 2.0 metres. Alternatively, all water run-off should be collected and channelled away from the proposed structure, with this situation being maintained throughout the life of the structure.

Service trench excavations located adjacent to footings should be avoided. However, where this cannot be avoided the service trench excavations should be backfilled in such a manner so as to prevent water from seeping beneath the footings.

3.3.3 **Footings Located Adjacent to Easement:** Footings located adjacent to any easements, which may be located on the subject site should be deepened to below the 45^0 angle of repose line extending from the base of the easement.

3.4. GENERAL

3.4.1 **Underground Services:** Ongoing settlements within the significant depths of fill underlying the subject site will result in distortion and maintenance requirements to underground services at the subject site. Recognising this, the following precautions should be taken for any proposed underground services at the subject site:

- All services should be laid with maximum possible grades to minimise future maintenance requirements.

- Flexible joints should be incorporated for all services.

- Services connecting to the proposed structure should be appropriately sleeved at the point of connection to allow for differential settlements where the structure is suspended.

- Where applicable, services should be tied to associated suspended structures.

3.4.2 **General:** Conditions are likely to vary significantly with the seasons for the subject site. In particular, the near surface fill underlying the site may become saturated and unworkable following prolonged periods of rainfall.

The above recommendations are based on the bore and test results together with experience of similar conditions and are expected to be typical of the area or areas being considered. Nevertheless, all excavations should be examined carefully and any unusual feature reported to us in order to determine whether any changes might be advisable.

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Yours faithfully,

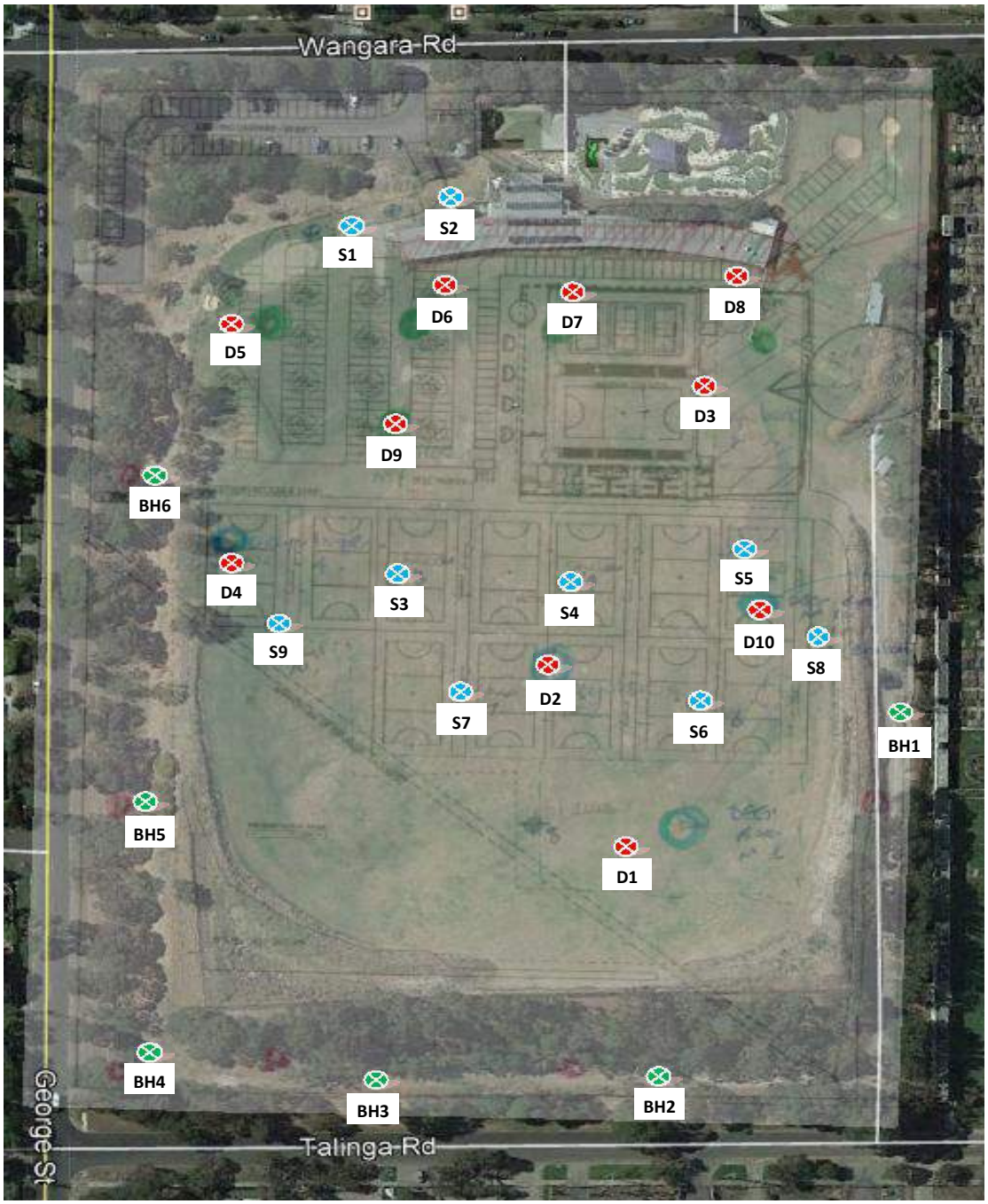




PADDY BEASLEY B.Eng. Civil (Hons)
A.S. JAMES PTY LTD

Reviewed by:
T.J. HOLT MIEAust CPEng EC-1022
A.S. JAMES PTY LTD

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A.S. JAMES PTY LTD
Geotechnical Engineers

JOB: 20 Wangara Road
SANDRINGHAM

JOB No: 119367 **Nov '18**

LEGEND

- Denotes approximate deep borehole location
- Denotes approximate shallow borehole location
- Denotes approximate perimeter borehole location

BORE PLAN

CHECKED: T. Holt
DRAWN: P. Beasley

SOURCE: Google Earth

FIGURE 1

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D1

Job No. 119367 **Date:** Nov '18

Ground Water: 11.5 metres

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt and gravels	**0.00**		
	Grey brown			
	Moist, medium dense	**0.60**		
FILL	SAND, with silt, clay, plastics, rags, metal scraps			
	Black / grey			
	Moist			
	Medium dense			
	Shallow perched water encountered on clay lense			
			+	11 / 14 / 16
				N = 30
		7.60		
CLAY (CL)	Grey brown			
	Silty, with gravels			
	Moist			
	Stiff to very stiff			
			+	19 / 21 for 100mm
		9.60		
SAND (SC)	Grey brown			
	Clayey, silty lenses			
	Moist			
	Dense			
	BOREHOLE TERMINATED	**12.00**	+	40 / -

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 2

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D2

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravels and brick fragments	**0.00**		
	Grey brown			
	Moist, medium dense	**0.50**		
FILL	SAND, with silt, clay, plastics, rags, metal scraps			
	Black / grey			
	Moist			
	Medium dense			
	With plastics, wire and concrete			
			+	40 for 90mm
SAND (SM)	Brown / grey brown	**5.50**		
	Silty			
	Moist			
	Medium dense			
		6.80		
CLAY (CL)	Grey brown,			
	Sandy, with silt and gravels			
	Moist, stiff to very stiff	**7.60**	+	41 / -
SAND (SC)	Grey brown			
	Clayey, silty lenses			
	Moist		+	40 / -
	Dense			
	BOREHOLE TERMINATED	**13.50**	+	40 for 100mm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 3**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D3

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravels and brick fragments	**0.00**		
	Grey brown			
	Moist, medium dense	**0.60**		
FILL	Gravels, sand, plastic, Coke cans (numerous)			
	Loose to medium dense	**1.70**		
FILL	SAND, clayey			
	Dark grey			
	With plastic bags, metal scraps		+	5 / 11 / 25
				N = 36
	100mm concrete at 6m			
			+	40 for 60mm
		8.00		
CLAY (CL)	Pale grey / grey brown			
	Silty / sandy		+	28 / 12 for 40mm
	Moist			
	Stiff to very stiff			
SAND (SC)	Orange brown	**11.00**		
	Clayey, lightly cemented			
	Moist			
	Medium dense to dense		+	40 for 100mm
	BOREHOLE TERMINATED	**12.50**		

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 4

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D4

Job No. 119367 **Date:** Nov '18

Ground Water: 14.0 metres

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, silty with gravels			
	Grey brown			
	Moist			
	Medium dense			
FILL	CLAY, with sand, silt and gravels	2.80		
	Grey brown / black		+	7 / 9 / 13
	Moist			N = 22
	Firm	3.70		
FILL	CLAY, with silt, sand and gravels			
	Grey brown		+	25 / 15 for 100mm
	Moist			
	Firm			
	With rags, plastics and metal scraps			
			+	7 / 7 / 15 for 60mm
CLAY (CL)	Grey	6.90		
	Silty, with gravels and sand			
	Moist			
	Stiff to very stiff			
		8.90		
			+	40 for 120mm
SAND (SC)	Grey / grey brown			
	Clayey			
	Moist			
	Medium dense to dense			
			+	40 for 120mm
SAND (SM)	Yellow / grey brown	12.80		
	Very silty			
	Moist			
	Medium dense to dense			
	BOREHOLE TERMINATED	15.00	+	40 for 100mm

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 5

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D5

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, silty, with gravels			
	Grey brown / black			
	Moist			
	Loose to medium dense			
FILL	CLAY, sandy, with silt	**3.10**	+	22 / 18 / -
	Grey			
	Moist, firm			
		3.80		
FILL	CLAY, with silt, sand		+	17 / 4 / 30 for 100mm
	Grey / black			
	Moist			
	Firm			
	With plastics, rags and metal scraps			
		7.00		
CLAY (CL)	Grey brown			
	Sandy, with silt and gravels		+	13 / 25 / -
	Moist			
	Stiff to very stiff	**8.20**		
			+	40 for 120mmm
SAND (SC)	Pale grey / grey brown			
	Clayey			
	Moist			
	Medium dense to dense			
	BOREHOLE TERMINATED	**12.00**	+	40 for 80mm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 6**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D6

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, silty, with gravels			
	Grey / black			
	Moist			
	Medium dense			
		1.50		
FILL	SAND, with silt			
	Black / grey brown			
	Moist			
	Medium dense			
	With rags, metal scraps, plastics, wire			
			+	28 / 12 for 40mm
SAND (SM)	Grey / grey brown	**7.20**		
	Silty		+	40 for 110mm
	Moist, medium dense			
		8.00		
CLAY (CL)	Grey brown			
	Sandy, with silt			
	Moist			
	Very stiff		+	30 / 10 for 50mm
		9.50		
SAND (SC)	Grey brown			
	Clayey, with silt			
	Moist			
	Medium dense to dense			
	BOREHOLE TERMINATED	**12.00**	+	40 for 60mm

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 7

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D7

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, with silt and gravels			
	Dark grey / black			
	Moist			
	Medium dense			
		1.50		
FILL	CLAY, with sand and silt			
	Black / grey brown			
	Moist			
	Firm			
	With rags, wire, plastics			
			+	20 / 20 for 50mm
		6.80		
CLAY (CL)	Grey brown			
	Sandy, with silt and gravels			
	Moist		+	40 for 80mm
	Stiff to very stiff	**7.70**		
SAND (SC)	Grey brown / yellow			
	Clayey, with gravels and silt			
	Moist			
	Medium dense to dense			
			+	40 for 70mm
	BOREHOLE TERMINATED	**13.50**	+	40 for 70mm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 8**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: 20 Wangara Road SANDRINGHAM **Borehole** D8

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, silty with gravels	**0.00**		
	Brown			
	Moist	**0.60**		
	Medium dense			
FILL	SAND, with silt and gravels			
	Grey brown / black			
	Moist			
	Medium dense		+	8 / 9 / 10
	With rags, plastics, metal scraps, wire			N = 19
			+	34 / 6 for 10mm
		6.70		
CLAY (CL)	Pale grey brown			
	Sandy, silty			
	Moist		+	40 for 60mm
	Stiff to very stiff	**7.70**		
			+	40 for 100mm
SAND (SC)	Grey / orange brown			
	Clayey			
	Moist			
	Medium dense to dense			
	BOREHOLE TERMINATED	**12.00**	+	40 for 90mm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 9**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: 20 Wangara Road SANDRINGHAM
Borehole D9
Job No. 119367
Date: Nov '18
Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, silty with gravels	**0.00**		
	Brown			
	Moist, medium dense	**0.40**		
FILL	CLAY, sandy			
	Dark brown			
	Moist			
	Soft to firm			
	With metal scraps and brick fragments			
			+	3 / 3 / 2
				N = 5
			+	2 / 4 / 8
				N = 12
		8.50		
CLAY (CL)	Grey		+	11 / 25 / -
	Sandy			
	Moist to wet			
	Stiff			
	Tending very sandy			
	BOREHOLE TERMINATED	**12.00**	+	8 / 18 / 25
				N = 43

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 10

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** D10

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, silty, with gravels			
	Grey brown			
	Moist to very moist	0.70		
	Medium dense			
FILL	SAND, with silt, clay, gravels			
	Dark grey			
	Moist			
	Medium dense			
	With metal scraps, glass			
	Perched water at 2.0 metres			
		8.20		
			+	9 / 23 / 25
CLAY (CL)	Grey / grey brown / orange			N = 48
	Sandy			
	Moist			
	Stiff			
	Tending very sandy			
	BOREHOLE TERMINATED	12.50	+	30 / -

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 11**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM
Borehole BH1
Job No. 119367
Date: Nov '18
Ground Water: NIL

Soil Type	Description		Depth	Tests	Results
			0.00		
FILL	SAND, with silt, gravel, brick fragments				
	Brown				
	Dry to moist				
	Medium dense				
	BOREHOLE TERMINATED	REFUSAL	3.00		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 12**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM
Borehole BH2
Job No. 119367
Date: Nov '18
Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, with silt, gravel, glass			
	Brown			
	Dry to moist			
	Medium dense			
CLAY (CL)	Orange brown / grey	3.00		
	With silt, sand			
	Moist			
	Firm to stiff			
	BOREHOLE TERMINATED	4.00		

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 13

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM
Borehole BH3
Job No. 119367
Date: Nov '18
Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, with silt, glass, plastics			
	Brown			
	Dry to moist			
	Medium dense			
	Tending clay fill from 3.3 metres			
	BOREHOLE TERMINATED	4.00		

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 14

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM
Borehole BH4
Job No. 119367
Date: Nov '18
Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
				Note: Change in Scale
		0.00		
FILL	SAND, with silt, gravel, glass, plastics			
	Brown			
	Dry to moist			
	Medium dense			
SAND (SC)	Pale brown	**3.00**		
	Clayey, silty			
	Moist			
	Medium dense to dense			
	BOREHOLE TERMINATED	**4.00**		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 15**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** BH5

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, with silt, gravel, plastics			
	Brown			
	Dry to moist			
	Medium dense			
SAND (SC)	Grey	3.00		
	Clayey, silty			
	Moist			
	Medium dense			
	BOREHOLE TERMINATED	4.00		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 16**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** BH6

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravel	**0.00**		
	Brown			
	Dry to moist			
	Medium dense			
SAND (SM)	Dark grey			
	Silty, with clay			
	Moist	**2.50**		
	Medium dense			
		3.00		
SAND (SC)	Orange brown / grey			
	Clayey, with silt			
	Moist			
	Medium dense	**4.00**		
	BOREHOLE TERMINATED			

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 17**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S1

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
		0.00		
FILL	SAND, silty, with gravel			
	Grey brown			
	Moist			
	Medium dense			
	BOREHOLE TERMINATED	3.00		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 18**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S2

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth		Tests	Results
		0.00			
FILL	SAND, silty, with gravel, brick fragments				
	Grey brown				
	Moist				
	Medium dense				
	BOREHOLE TERMINATED	3.00			

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 19**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S3

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, clay and gravels	**0.00**		
	Orange brown			
	Moist			
	Medium dense			
		1.10		
FILL	SAND, with clay, silt, gravels			
	Grey / dark grey			
	Moist, medium dense			
	With plastics, tin cans			
	BOREHOLE TERMINATED	**2.50**		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 20**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S4
Job No. 119367 **Date:** Nov '18
Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravels, brick fragements	0.00		
	Grey brown			
	Moist			
	Medium dense	1.00		
FILL	SAND, clayey			
	Dark grey			
	Moist, medium dense			
	With metal, glass, wood, fabric			
	BOREHOLE TERMINATED	2.50		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 21**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S5

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravel	**0.00**		
	Grey			
	Moist	**0.70**		
	Medium dense			
FILL	SAND, silty, trace clay			
	Dark grey			
	Moist, medium dense			
	With plastics, fabric, cans, ballast			
	BOREHOLE TERMINATED	**2.50**		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 22**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S6

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravel, brick fragments	**0.00**		
	Grey brown			
	Moist	**0.70**		
	Medium dense			
FILL	SAND, clayey, with silt			
	Dark grey			
	Moist, medium dense			
	With plastics, wire, metal scraps			
	BOREHOLE TERMINATED	**2.50**		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 23**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S7

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravel	**0.00**		
	Grey brown			
	Moist			
	Medium dense			
		1.20		
FILL	SAND, clayey, with silt			
	Dark grey			
	Moist, medium dense			
	With plastics, glass, fabric			
	BOREHOLE TERMINATED	**2.50**		

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 24**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S8

Job No. 119367 **Date:** Nov '18

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
FILL	SAND, with silt, gravel, brick fragments	**0.00**		
	Grey brown			
	Moist			
	Medium dense	**0.90**		
FILL	SAND, clayey, with silt, gravels			
	Dark grey			
	Moist, medium dense			
	With plastics, glass, tin			
	BOREHOLE TERMINATED	**2.50**		

+ Standard Penetration Test - N blows/150mm. incr.
I Undisturbed Sample - Diameter Stated
s Vane Shear Strength
p Pocket Penetrometer Resistance

c Apparent Cohesion
Ø Friction Angle
P Wet Density
w Moisture Content

L.L. Liquid Limit
P.L. Plastic Limit
P.I. Plasticity Index
L.S. Linear Shrinkage

Figure 25

A.S.JAMES PTY. LTD.
Geotechnical Engineers

Location: 20 Wangara Road SANDRINGHAM **Borehole** S9

Job No. 119367 **Date:** Nov '18

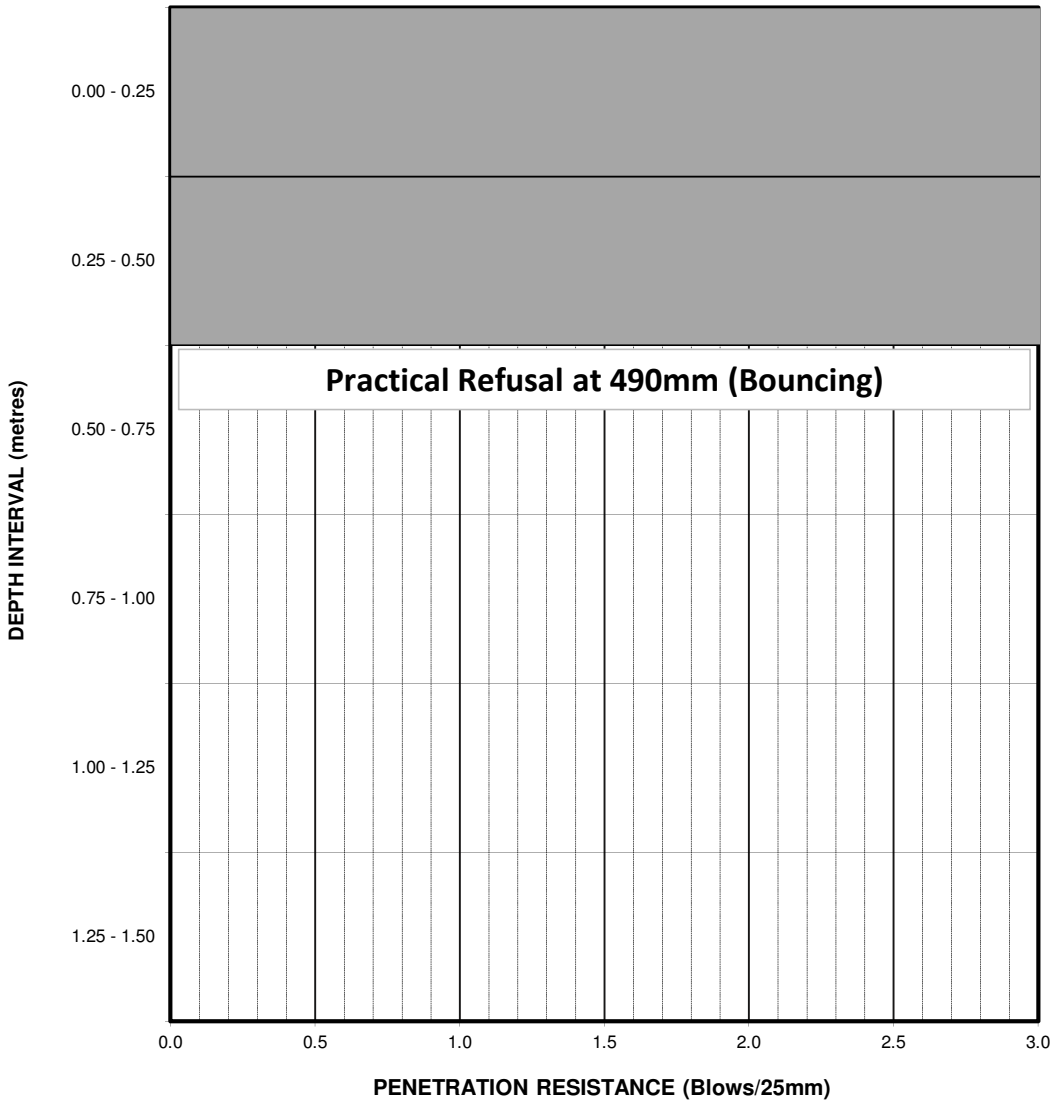
Ground Water: NIL

Soil Type	Description	Depth		Tests	Results
FILL	SAND, with silt, gravel, brick fragments	**0.00**			
	Grey brown				
	Moist				
	Medium dense				
FILL	SAND, clayey, with silt, gravels	**1.70**			
	Dark grey				
	Moist, medium dense				
	With plastics, glass, cans				
	BOREHOLE TERMINATED	**2.50**			

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 26**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

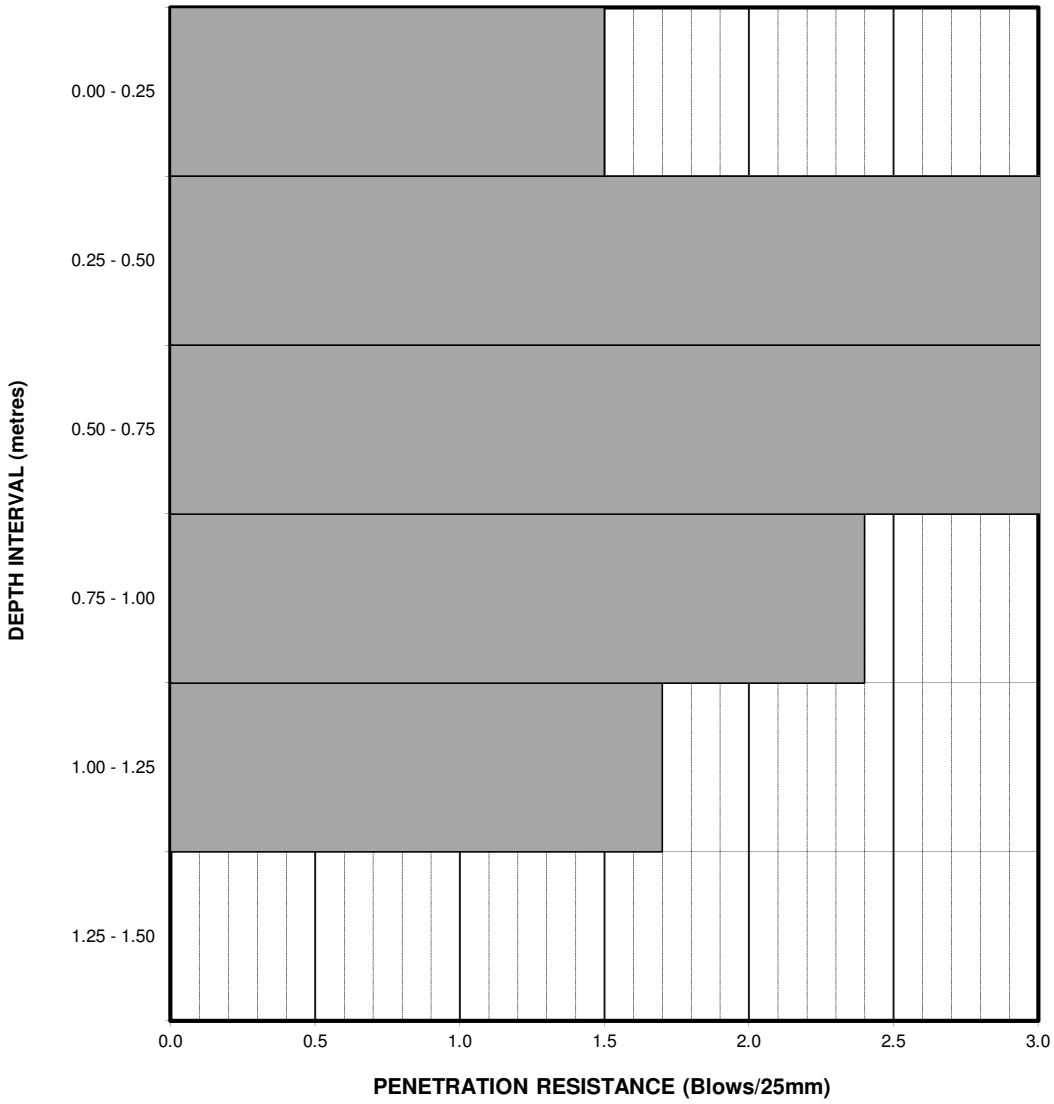


TEST LOCATION:
ADJACENT TO BOREHOLE D1
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 27

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

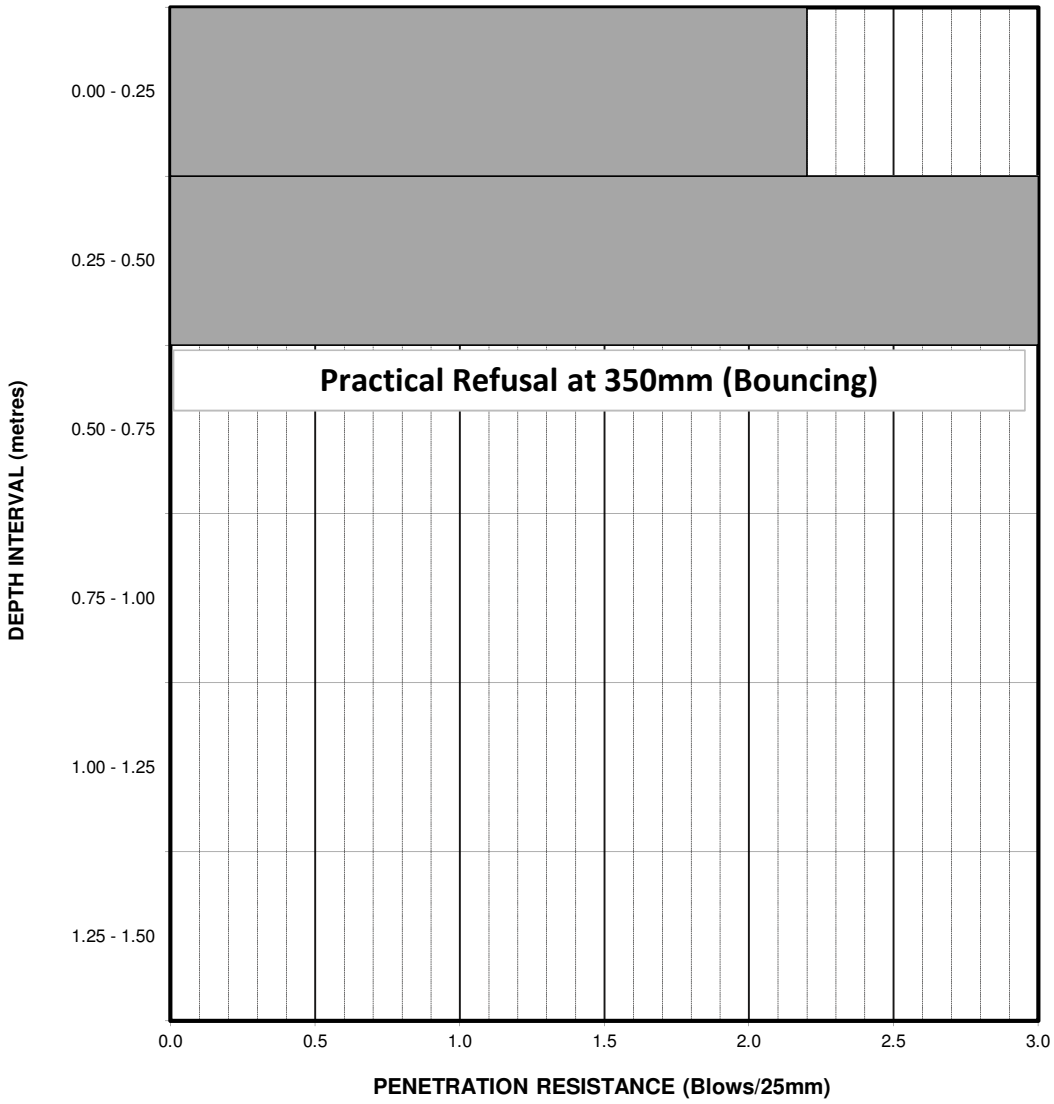


TEST LOCATION:
ADJACENT TO BOREHOLE D2
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 28

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

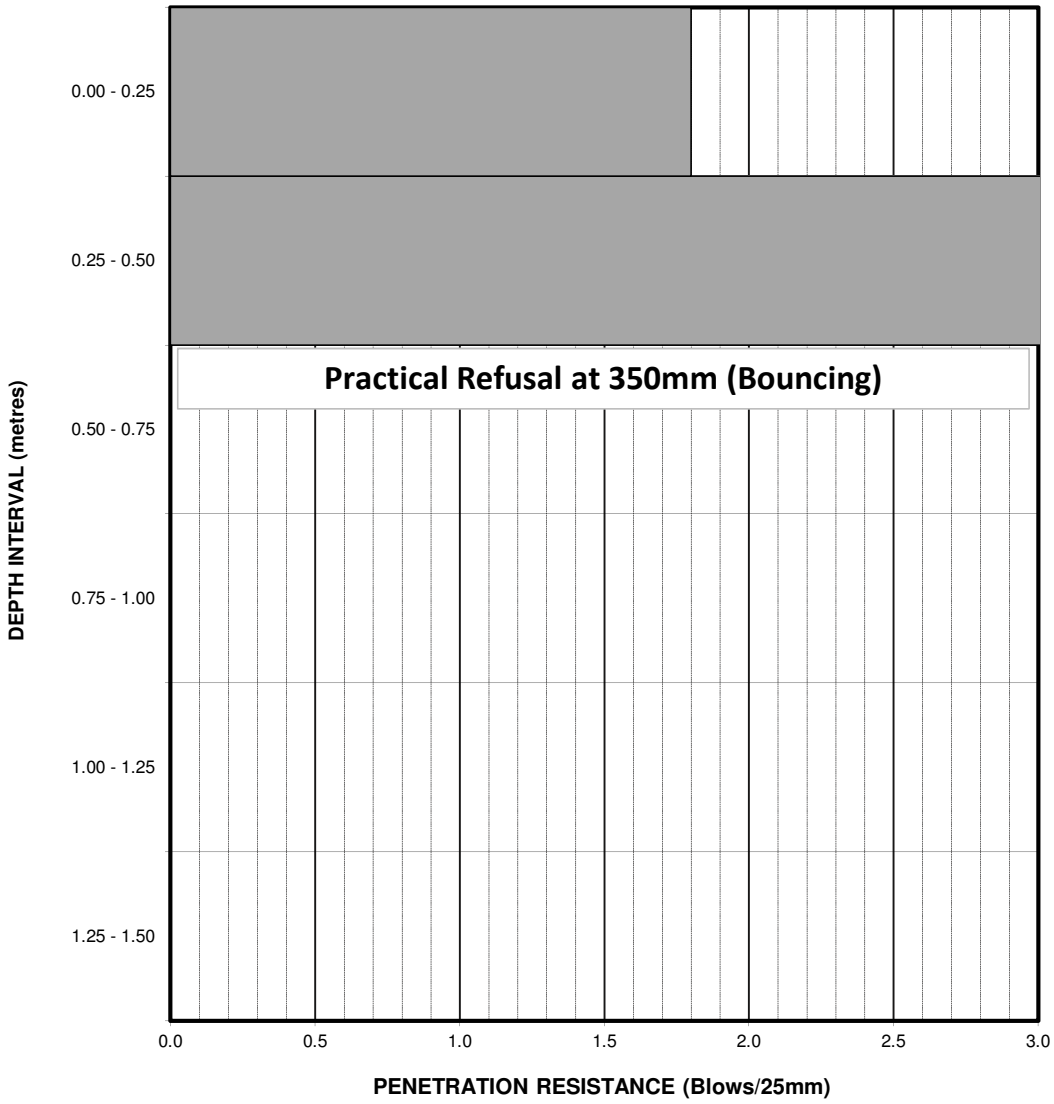


TEST LOCATION:
ADJACENT TO BOREHOLE D3
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 29

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

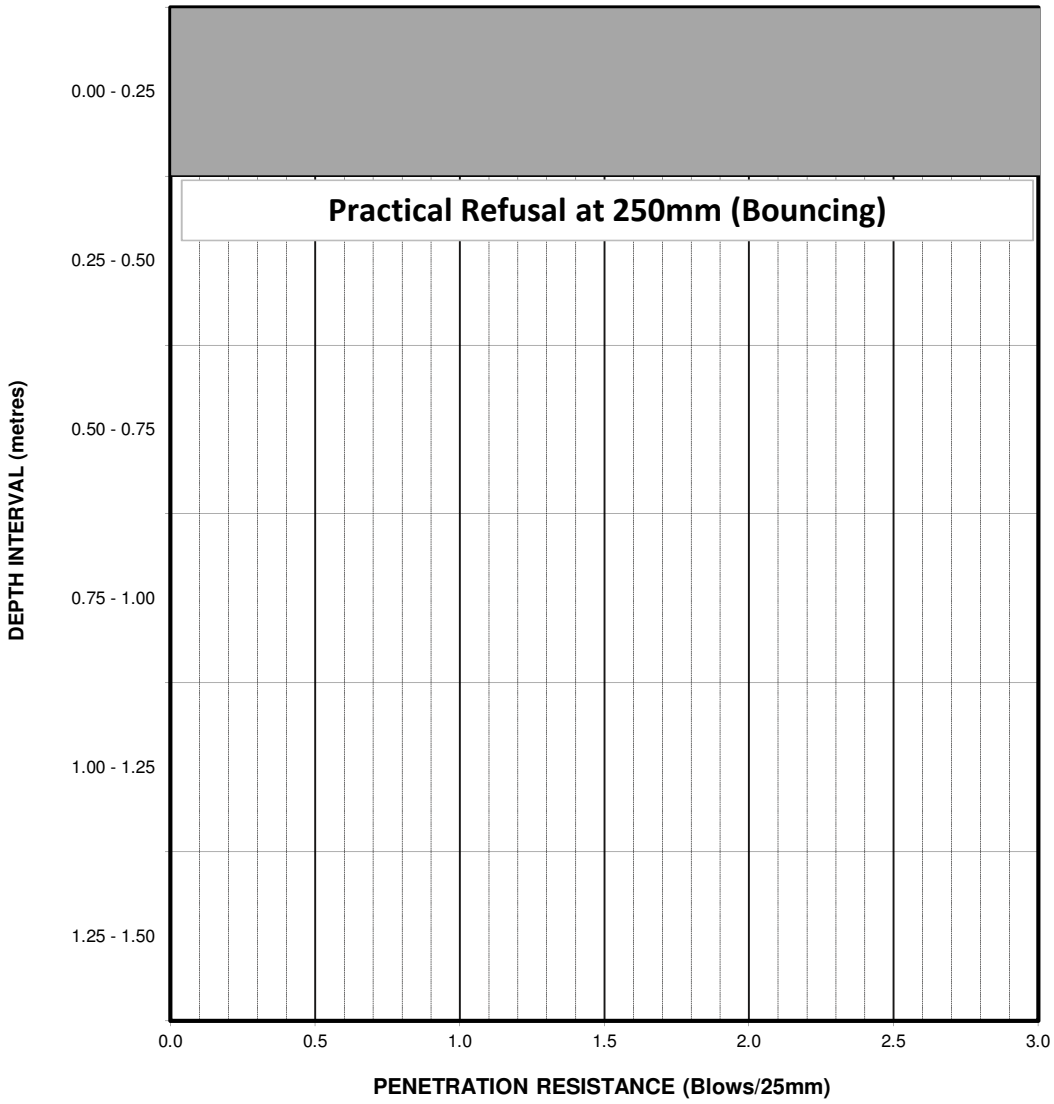


TEST LOCATION:
ADJACENT TO BOREHOLE D4
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 30

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

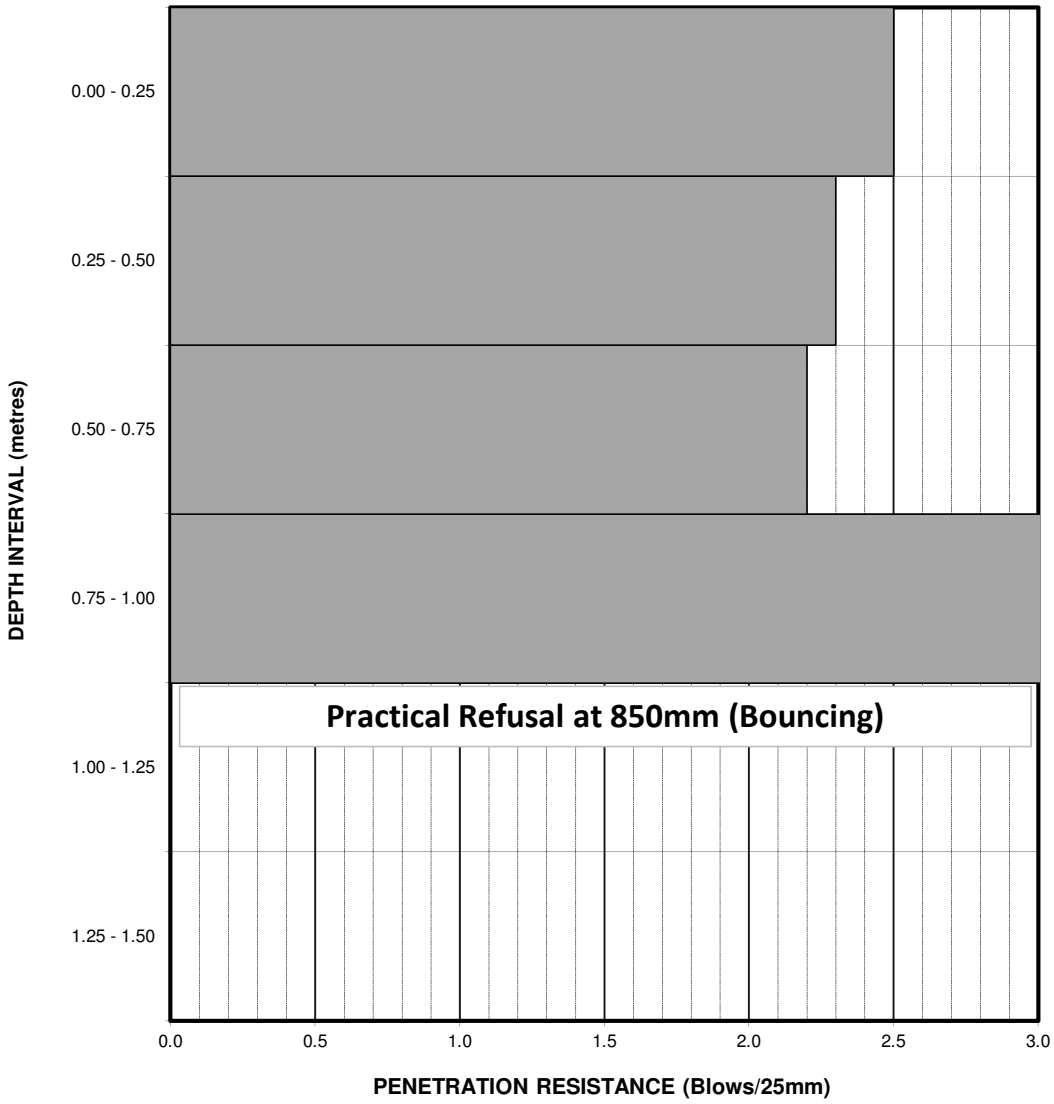


TEST LOCATION:
ADJACENT TO BOREHOLE D5
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 31

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

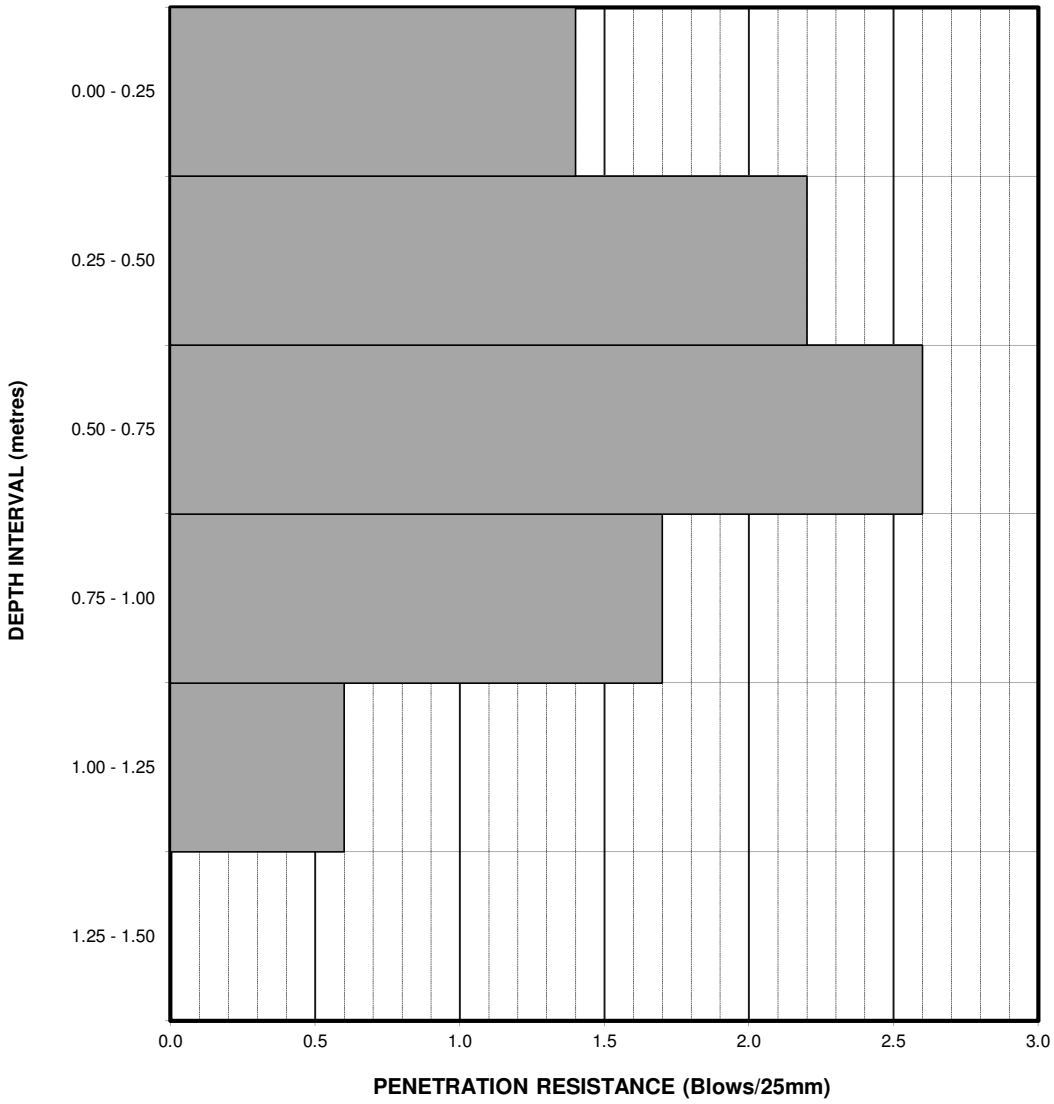


TEST LOCATION:
ADJACENT TO BOREHOLE D6
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 32

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

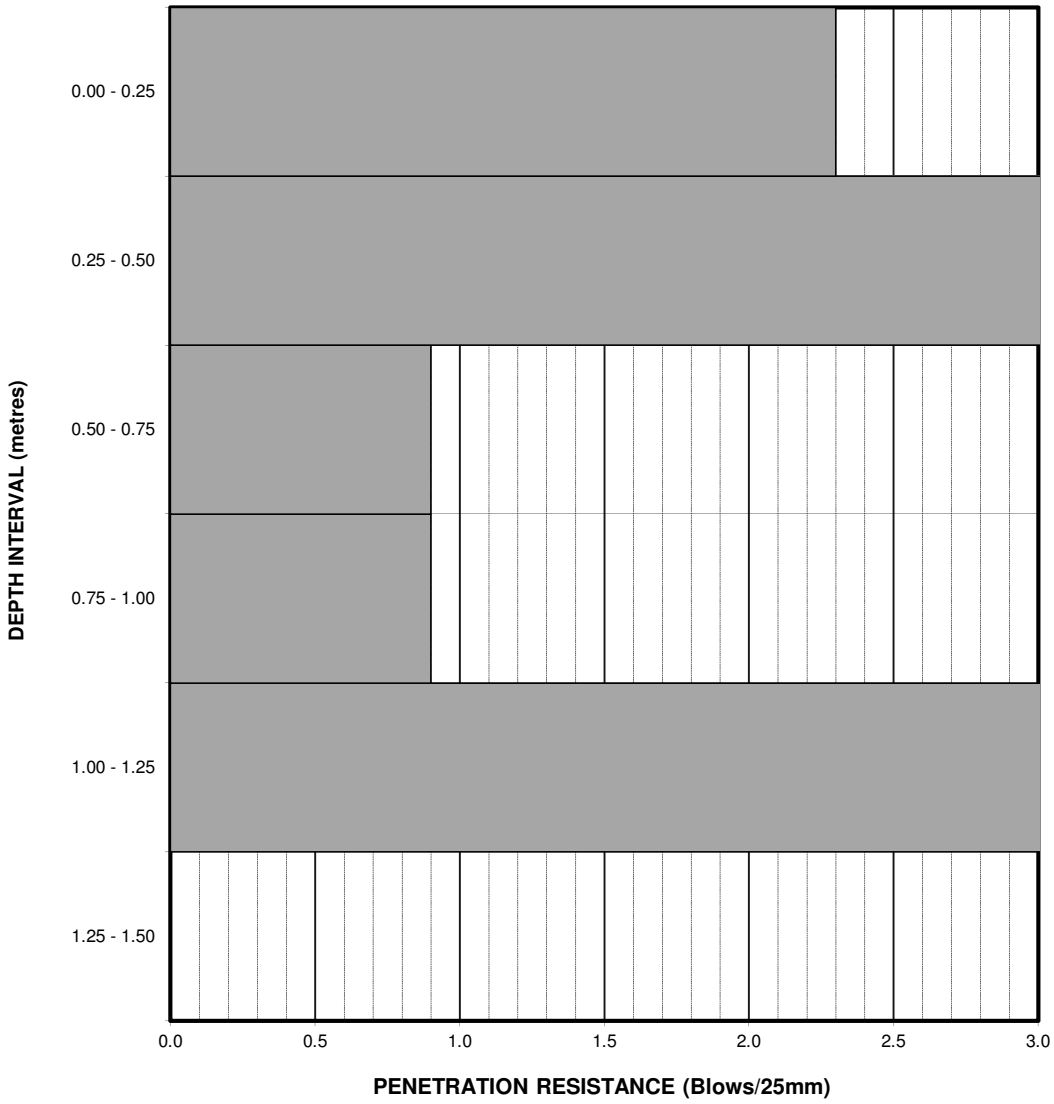


TEST LOCATION:
ADJACENT TO BOREHOLE D7
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 33

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres

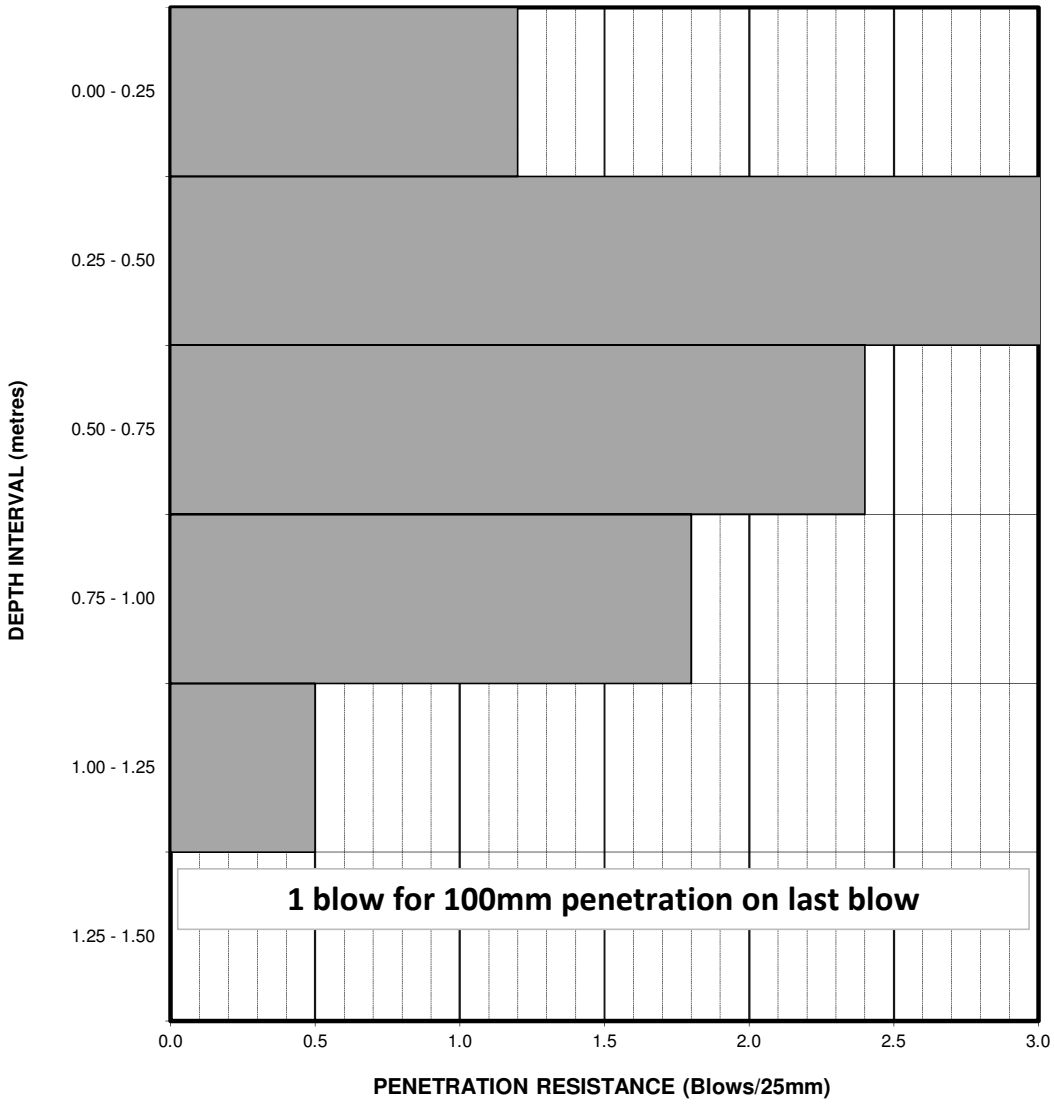


TEST LOCATION:
ADJACENT TO BOREHOLE D10
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 34

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

Depth below ground surface at the commencement of penetration: 0.0 metres



TEST LOCATION:
ADJACENT TO BOREHOLE S3
(REFER TO FIGURE 1)

DYNAMIC CONE PENETROMETER TEST (AS1289, 6.3.2, 1997) 325 sq.mm Cone - 9 kg Weight Falling 510 mm	Drawn / Tested: P. Beasley Checked: T. Holt	Figure 35

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

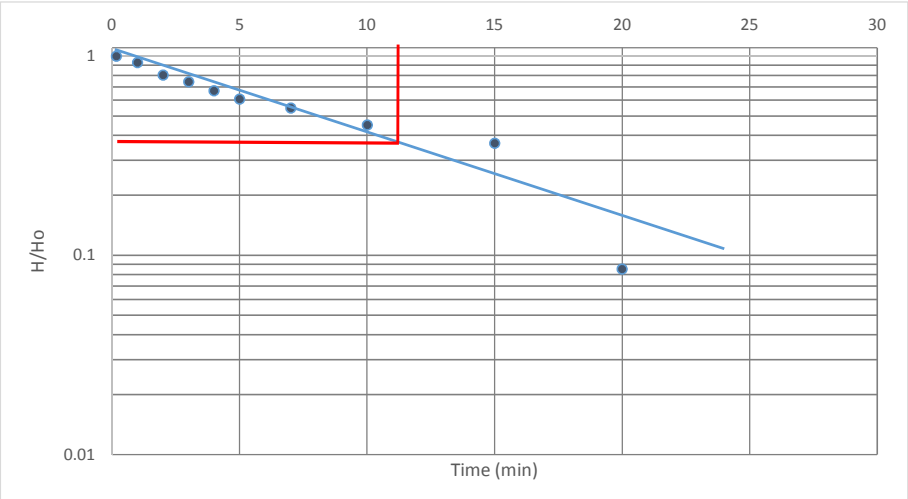
FALLING HEAD TEST COMPUTATIONS Location: **BH1 (Shallow)**

Depth of borehole 1.2 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.17	0.19	0.82	1
2	1	0.25	0.76	0.92683
3	2	0.35	0.66	0.80488
4	3	0.4	0.61	0.74390
5	4	0.46	0.55	0.67073
6	5	0.51	0.5	0.60976
7	7	0.56	0.45	0.54878
8	10	0.64	0.37	0.45122
9	15	0.71	0.3	0.36585
10	20	0.94	0.07	0.08537
11	25	1.01	0	0
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

Array size	11	
Borehole Diameter	0.11	m
Height of Test	0.82	m
Cross Sectional Area	9.50E-03	m2
F	1.90E+00	
Input time at 0.37	**11.5**	**min**
Time	690	sec

Permeability 7.23E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 36

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

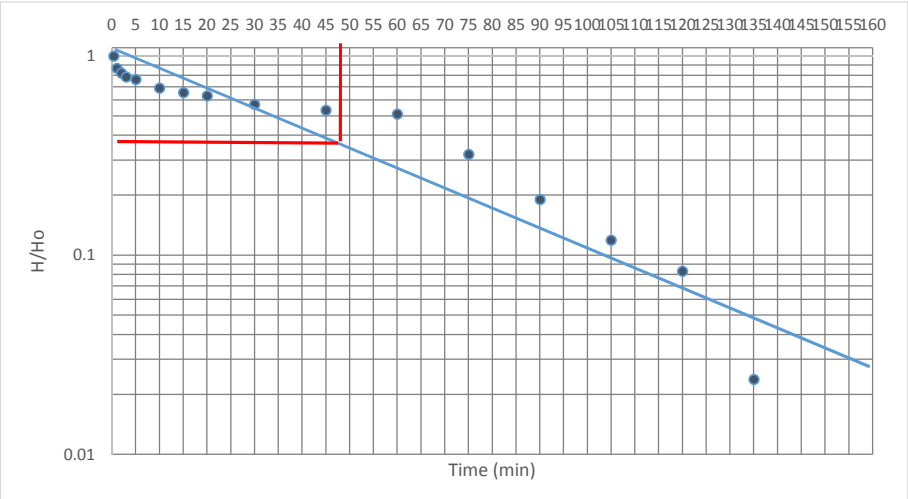
FALLING HEAD TEST COMPUTATIONS Location: **BH2 (Deep)**

Depth of borehole 3.5 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.33	2.05	0.84	1
2	1	2.16	0.73	0.86905
3	2	2.2	0.69	0.82143
4	3	2.23	0.66	0.78571
5	5	2.25	0.64	0.76190
6	10	2.31	0.58	0.69048
7	15	2.34	0.55	0.65476
8	20	2.36	0.53	0.63095
9	30	2.41	0.48	0.57143
10	45	2.44	0.45	0.53571
11	60	2.46	0.43	0.511905
12	75	2.62	0.27	0.321429
13	90	2.73	0.16	0.190476
14	105	2.79	0.1	0.119048
15	120	2.82	0.07	0.083333
16	135	2.87	0.02	0.02381
17	150	2.89	0	0
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Array size	17	
Borehole Diameter	0.11	m
Height of Test	1.25	m
Cross Sectional Area	9.50E-03	m2
F	2.51E+00	
Input time at 0.37	**47**	**min**
Time	2820	sec

Permeability 1.34E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951)	Tested: P. Beasley	Figure
BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Checked: T. Holt	37

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

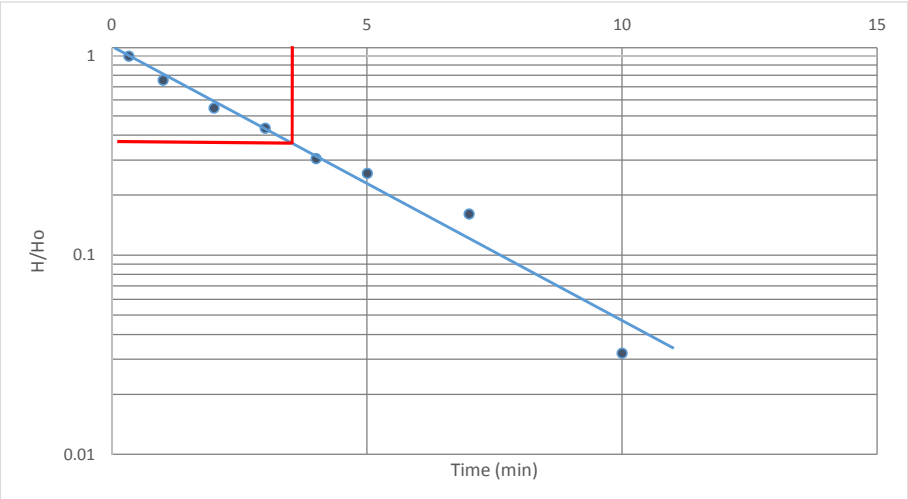
FALLING HEAD TEST COMPUTATIONS Location: **BH2 (Shallow)**

Depth of borehole 0.9 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.33	0	0.62	1
2	1	0.15	0.47	0.75806
3	2	0.28	0.34	0.54839
4	3	0.35	0.27	0.43548
5	4	0.43	0.19	0.30645
6	5	0.46	0.16	0.25806
7	7	0.52	0.1	0.16129
8	10	0.6	0.02	0.03226
9	13	0.62	0	0.00000
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Array size	9	
Borehole Diameter	0.11	m
Height of Test	0.7	m
Cross Sectional Area	9.50E-03	m2
F	1.72E+00	
Input time at 0.37	**3.5**	**min**
Time	210	sec

Permeability 2.62E-05 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 38

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

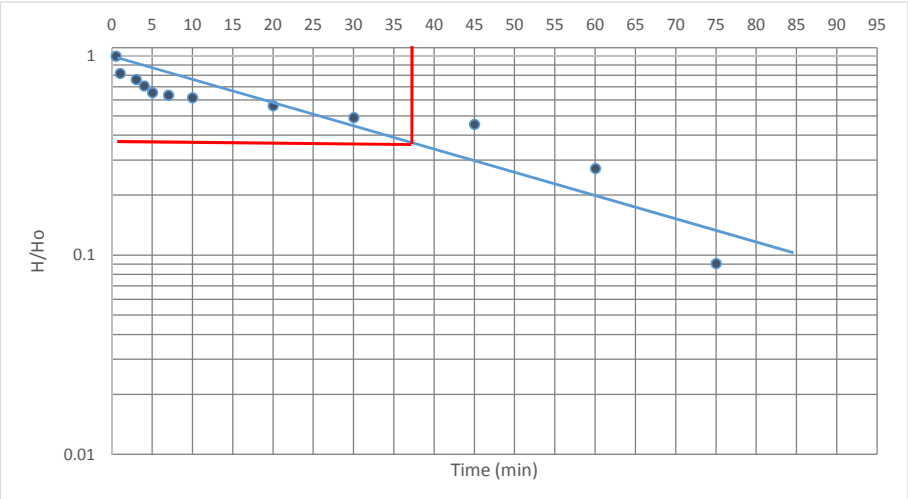
FALLING HEAD TEST COMPUTATIONS Location: **BH3 (Deep)**

Depth of borehole 3.3 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.5	2.4	0.55	1
2	1	2.5	0.45	0.81818
3	3	2.53	0.42	0.76364
4	4	2.56	0.39	0.70909
5	5	2.59	0.36	0.65455
6	7	2.6	0.35	0.63636
7	10	2.61	0.34	0.61818
8	20	2.64	0.31	0.56364
9	30	2.68	0.27	0.49091
10	45	2.7	0.25	0.45455
11	60	2.8	0.15	0.272727
12	75	2.9	0.05	0.090909
13	90	2.95	0	0
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Array size	13	
Borehole Diameter	0.11	m
Height of Test	0.7	m
Cross Sectional Area	9.50E-03	m2
F	1.72E+00	
Input time at 0.37	**37**	**min**
Time	2220	sec

Permeability 2.48E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 39

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

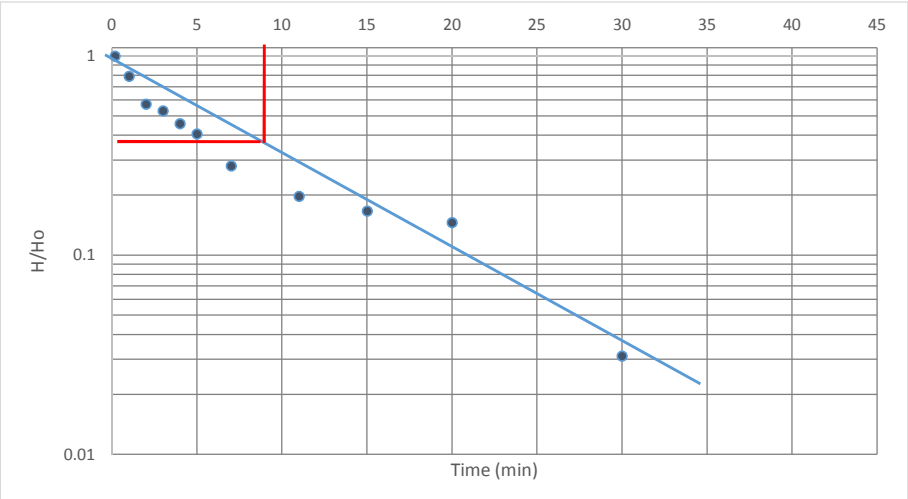
FALLING HEAD TEST COMPUTATIONS Location: **BH3 (Shallow)**

Depth of borehole 1.4 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.17	0	0.96	1
2	1	0.2	0.76	0.79167
3	2	0.41	0.55	0.57292
4	3	0.45	0.51	0.53125
5	4	0.52	0.44	0.45833
6	5	0.57	0.39	0.40625
7	7	0.69	0.27	0.28125
8	11	0.77	0.19	0.19792
9	15	0.8	0.16	0.16667
10	20	0.82	0.14	0.14583
11	30	0.93	0.03	0.03125
12	40	0.96	0	0
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Array size	12	
Borehole Diameter	0.11	m
Height of Test	1.2	m
Cross Sectional Area	9.50E-03	m2
F	2.44E+00	
Input time at 0.37	**9**	**min**
Time	540	sec

Permeability 7.20E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 40

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

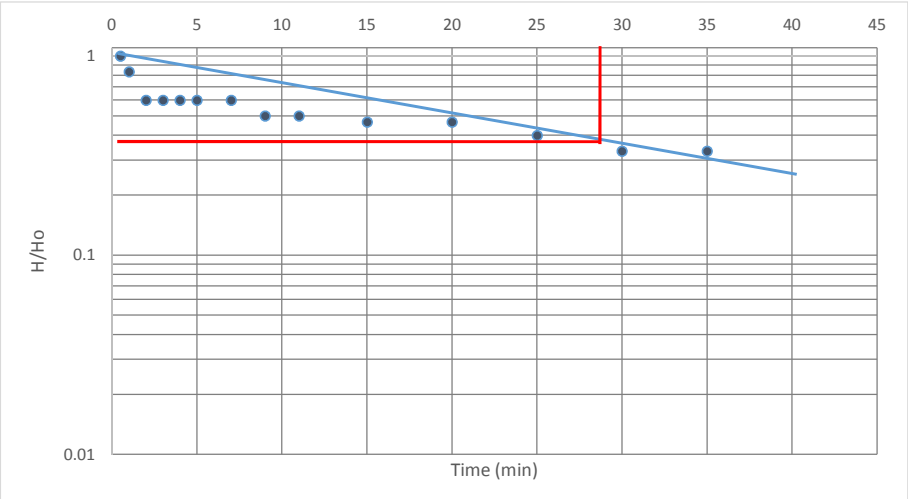
FALLING HEAD TEST COMPUTATIONS Location: **BH4 (Deep)**

Depth of borehole 3 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.5	1.6	0.3	1
2	1	1.65	0.25	0.83333
3	2	1.72	0.18	0.60000
4	3	1.72	0.18	0.60000
5	4	1.72	0.18	0.60000
6	5	1.72	0.18	0.60000
7	7	1.72	0.18	0.60000
8	9	1.75	0.15	0.50000
9	11	1.75	0.15	0.50000
10	15	1.76	0.14	0.46667
11	20	1.76	0.14	0.466667
12	25	1.78	0.12	0.4
13	30	1.8	0.1	0.333333
14	35	1.8	0.1	0.333333
15	40	1.9	0	0
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Array size	15	
Borehole Diameter	0.11	m
Height of Test	1.2	m
Cross Sectional Area	9.50E-03	m2
F	2.44E+00	
Input time at 0.37	**29**	**min**
Time	1740	sec

Permeability 2.23E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 41

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

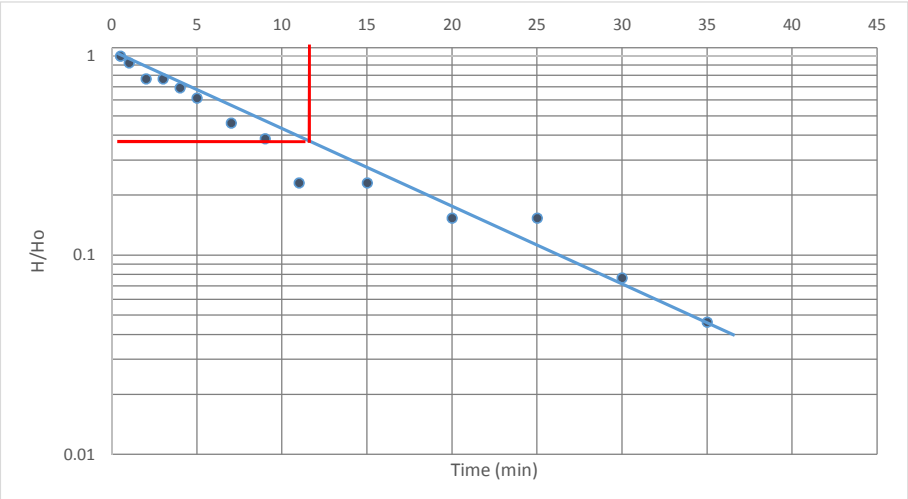
FALLING HEAD TEST COMPUTATIONS Location: **BH4 (Shallow)**

Depth of borehole 1 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.5	0.2	0.65	1
2	1	0.25	0.6	0.92308
3	2	0.35	0.5	0.76923
4	3	0.35	0.5	0.76923
5	4	0.4	0.45	0.69231
6	5	0.45	0.4	0.61538
7	7	0.55	0.3	0.46154
8	9	0.6	0.25	0.38462
9	11	0.7	0.15	0.23077
10	15	0.7	0.15	0.23077
11	20	0.75	0.1	0.153846
12	25	0.75	0.1	0.153846
13	30	0.8	0.05	0.076923
14	35	0.82	0.03	0.046154
15	40	0.85	0	0
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Array size	15	
Borehole Diameter	0.11	m
Height of Test	0.6	m
Cross Sectional Area	9.50E-03	m2
F	1.57E+00	
Input time at 0.37	**11.5**	**min**
Time	690	sec

Permeability 8.76E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 42

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

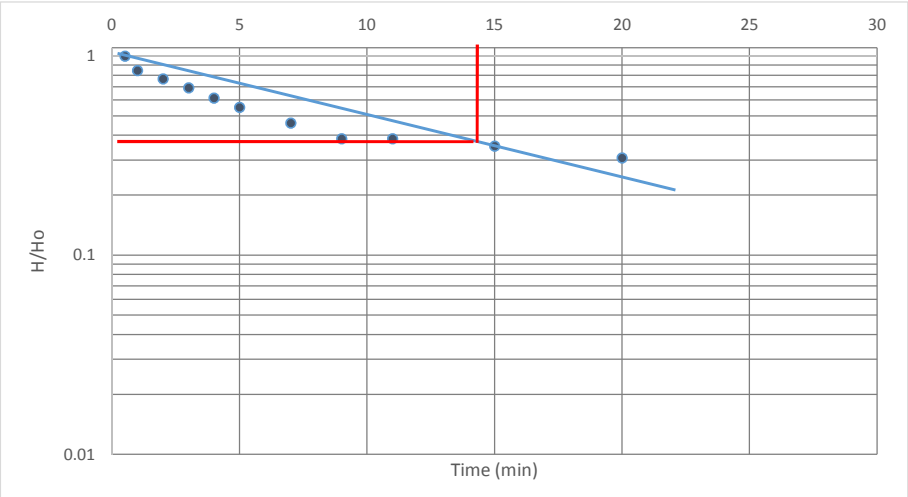
FALLING HEAD TEST COMPUTATIONS Location: **BH5 (Shallow)**

Depth of borehole 1.5 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.5	0.55	0.65	1
2	1	0.65	0.55	0.84615
3	2	0.7	0.5	0.76923
4	3	0.75	0.45	0.69231
5	4	0.8	0.4	0.61538
6	5	0.84	0.36	0.55385
7	7	0.9	0.3	0.46154
8	9	0.95	0.25	0.38462
9	11	0.95	0.25	0.38462
10	15	0.97	0.23	0.35385
11	20	1	0.2	0.307692
12	25	1.2	0	0
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Array size	12	
Borehole Diameter	0.11	m
Height of Test	0.75	m
Cross Sectional Area	9.50E-03	m2
F	1.80E+00	
Input time at 0.37	**14**	**min**
Time	840	sec

Permeability 6.29E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 43

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

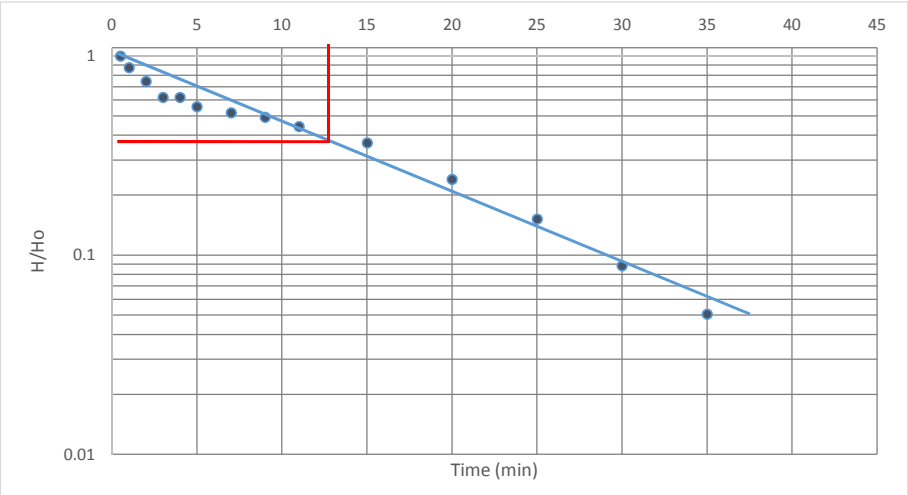
FALLING HEAD TEST COMPUTATIONS Location: **BH6 (Deep)**

Depth of borehole 3.6 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.5	1	0.79	1
2	1	1.1	0.69	0.87342
3	2	1.2	0.59	0.74684
4	3	1.3	0.49	0.62025
5	4	1.3	0.49	0.62025
6	5	1.35	0.44	0.55696
7	7	1.38	0.41	0.51899
8	9	1.4	0.39	0.49367
9	11	1.44	0.35	0.44304
10	15	1.5	0.29	0.36709
11	20	1.6	0.19	0.240506
12	25	1.67	0.12	0.151899
13	30	1.72	0.07	0.088608
14	35	1.75	0.04	0.050633
15	40	1.79	0	0
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Array size	15	
Borehole Diameter	0.11	m
Height of Test	2.4	m
Cross Sectional Area	9.50E-03	m2
F	3.99E+00	
Input time at 0.37	**12.5**	**min**
Time	750	sec

Permeability 3.17E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 44

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18

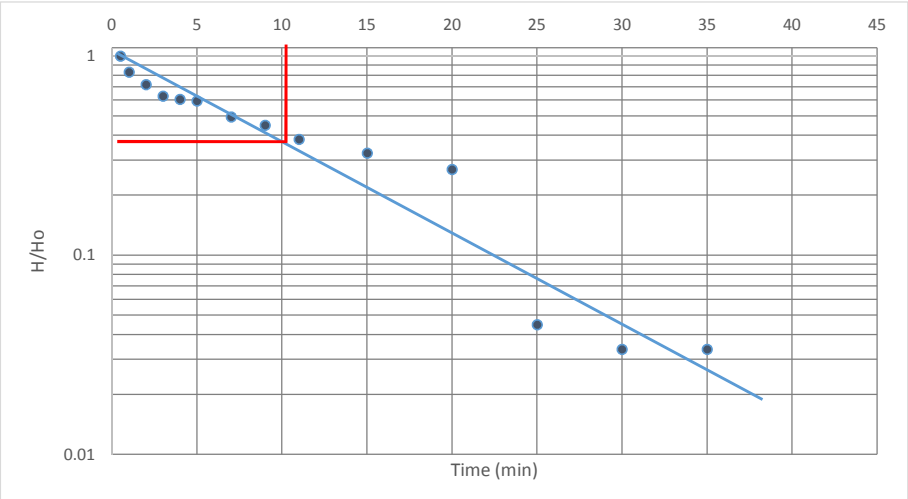
FALLING HEAD TEST COMPUTATIONS Location: **BH6 (Shallow)**

Depth of borehole 1.3 metres below surface

	Time (min)	Top of piezo to GW (m)	H (m)	H/Ho
1	0.5	0.35	0.89	1
2	1	0.5	0.74	0.83146
3	2	0.6	0.64	0.71910
4	3	0.68	0.56	0.62921
5	4	0.7	0.54	0.60674
6	5	0.71	0.53	0.59551
7	7	0.8	0.44	0.49438
8	9	0.84	0.4	0.44944
9	11	0.9	0.34	0.38202
10	15	0.95	0.29	0.32584
11	20	1	0.24	0.269663
12	25	1.2	0.04	0.044944
13	30	1.21	0.03	0.033708
14	35	1.21	0.03	0.033708
15	40	1.24	0	0
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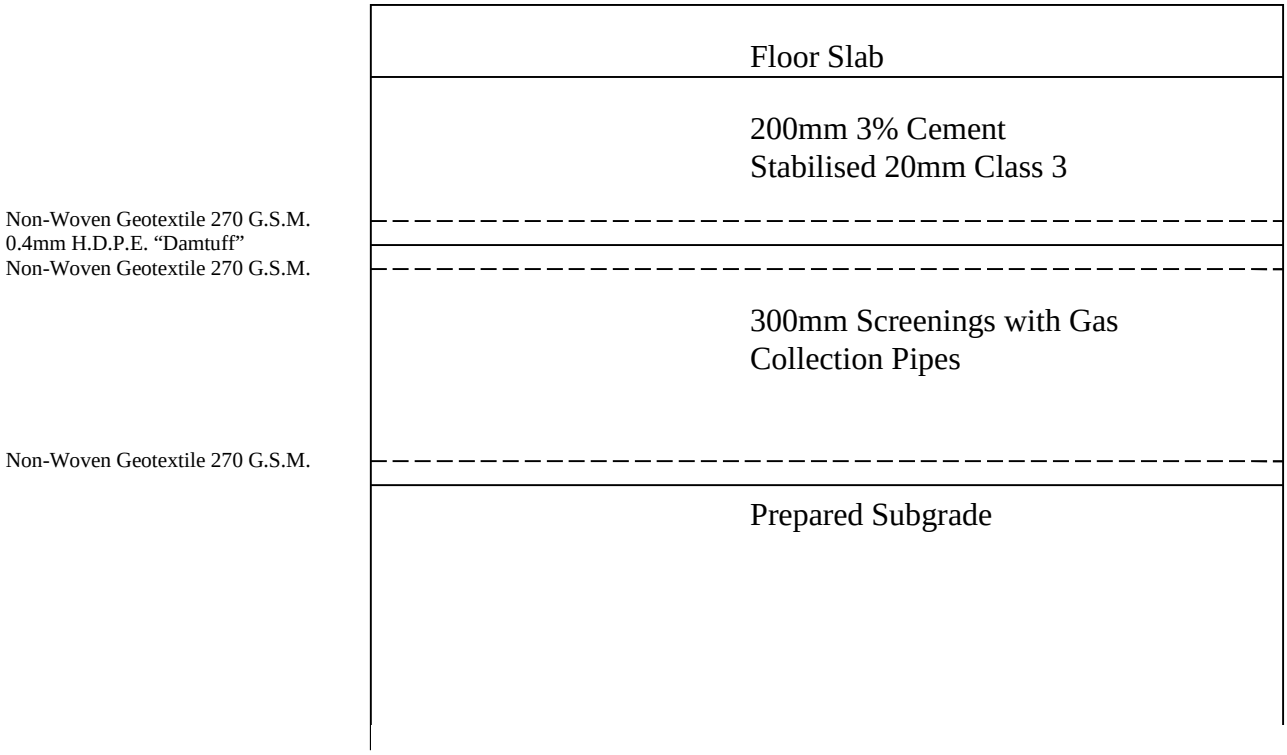
Array size	15	
Borehole Diameter	0.11	m
Height of Test	0.75	m
Cross Sectional Area	9.50E-03	m2
F	1.80E+00	
Input time at 0.37	**10**	**min**
Time	600	sec

Permeability 8.80E-06 m/s



FALLING HEAD PERMEABILITY TESTING (Hvorslev, 1951) BS 5930: 1999, "Code of Practice for Site Investigations" - Section 25.4	Tested: P. Beasley Checked: T. Holt	Figure 45

A.S. JAMES PTY LTD Geotechnical Engineers	JOB: 20 Wangara Road SANDRINGHAM	JOB No. 119367 DATE: Nov '18



METHANE COLLECTION LAYER	Tested: Checked: T. Holt	Figure 46

HARD ROCK GEOTECHNICAL
CONSULTING GEOTECHNICAL ENGINEERS

File Number: 180218

Date: 26 February 2018

Client: ACOR Kersulting Pty Ltd
Level 1, 173 Burke Road
GLEN IRIS VIC 3146

Distribution: - ACOR Kersulting Pty Ltd

RE: Desk Study of Sandringham Driving Range - Wangara Road, Sandringham

A desk study was conducted on 23 and 26 February 2018. The study was limited to,

- Checking the historic MMBW sewer plans and
- Viewing the historical aerial photographs of Melbourne at the Department of Environment, Land, Water and Planning, Laverton office.

The site is identified on the 'Geological Survey of Victoria' Melbourne Sheet (1:63,360) as being in the province of the Tertiary "Brighton Group" formation. This formation typically provided a good source of SAND and clayey SAND which was quarried 'sand pit' for the building industry.

No plans were available of the site in the MMBW historic plans.

Aerial photographs runs, 12/1945, 03/1954, 12/1957, 12/1945, 04/1963, 10/1968 and 04/1978. The photographs showed quarrying activity from 12/45 through to 10/1968 with the site filled and completed by 1978. The margins of the quarry appeared erratic with deep borrow pits down to the ground water table across the site. Excavations were evident along the entire eastern boundary. Due to the poor resolution of the existing photographs the extent and depth of the quarrying will need to be confirmed by direct sampling (boreholes).

The photographs were poorly defined but based on the photographs viewed and it should be assumed that the majority of the site was affected by the quarrying activity, and then filled with uncontrolled filling over time.

Visualising Victoria's Groundwater portal indicates the depth to the groundwater in the range less than 5m. This depth my give some indication to the depth of the quarry activity.

Settlement of the existing filling will have occurred over time. The magnitude of the future settlement is impossible to predict with any accuracy. Once the filling depth, material type and density is confirmed some estimated as to the future settlement maybe possible.

Please contact this office should you have further queries.

Yours faithfully,
Hard Rock Geotechnical Pty Ltd

Matthew Buckle B.E.(Geo.) BSc M.I.E Aust.
(Geotechnical Engineer)

CIVIL TEST PTY LTD
ABN 91 006 855 689
SOIL TESTING & GEOTECHNICAL CONSULTANTS
ACN 006 855 689

A REPORT ON THE

GEOTECHNICAL INVESTIGATION

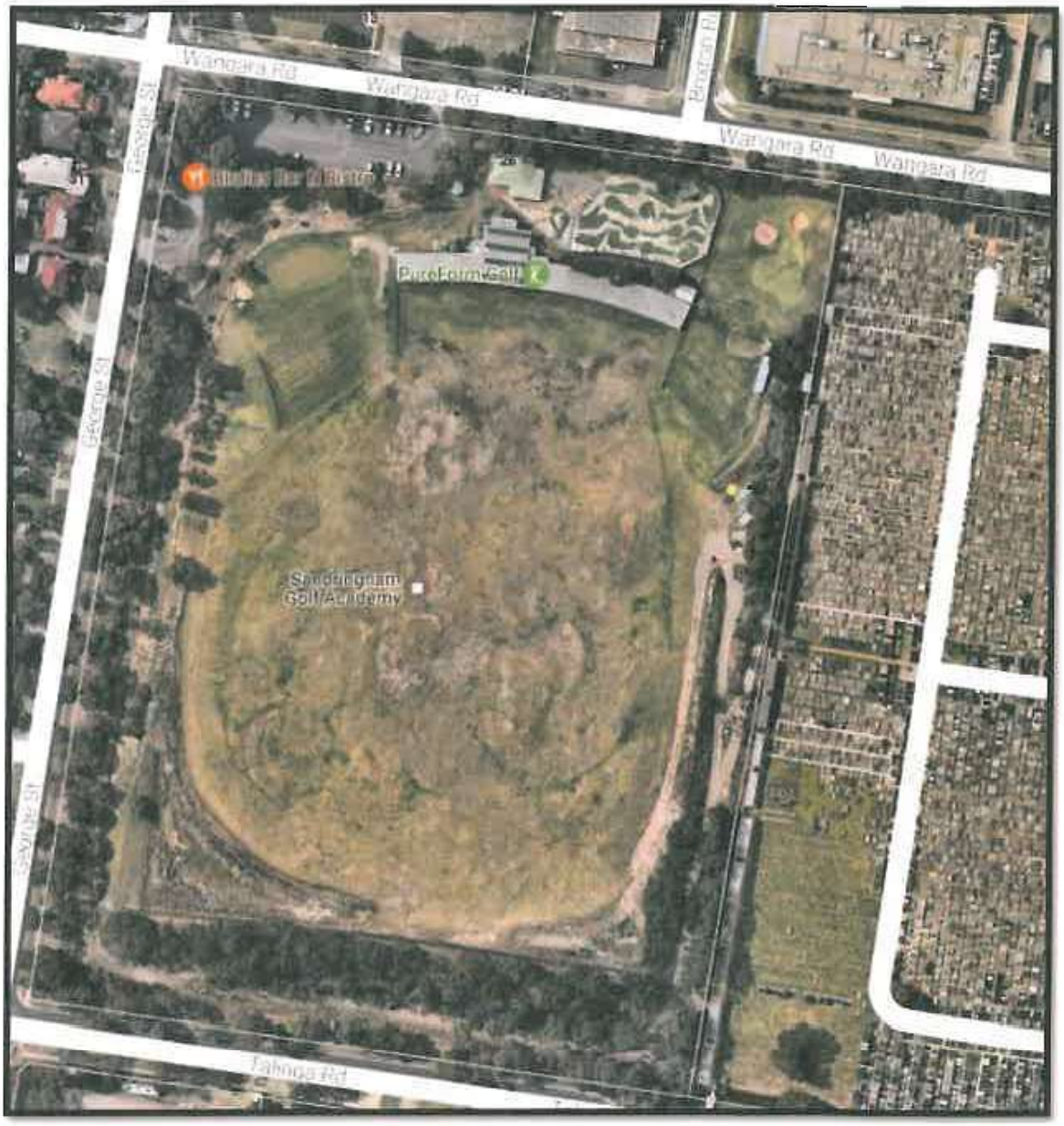
AT THE

SANDRINGHAM GOLF

DRIVING RANGE
(SANDRINGHAM GOLF ACADEMY)

Report N°: 1170139

Head Office: 10 Latham Street (P O Box 537) Mornington 3931 Tel: (03) 5975 6644 Fax: (03) 5975 9589
also at: Mildura (03) 5023 2870, Mitcham (03) 9874 5844, Wodonga (02) 6024 4343 & Wonthaggi (03) 5672 3900


Wangara Rd
Wangara Rd
Wangara Rd
Wangara Rd
George St
Bridan Pl
PuroFormGolf
Spiderdram
Golf Academy
Fahmys Rd

REPORT NO	:	1170139
CLIENT	:	Bayside City Council 75 Royal Avenue SANDRINGHAM VIC 3191
PROJECT	:	Sandringham Golf Driving Range (Sandringham Golf Academy) SANDRINGHAM
COMMISSION	:	Carry out a geotechnical investigation consisting of drilling eleven boreholes to 1.5 metres to establish the subsurface soil conditions and recommend on any special treatment that may be required to convert the existing site into a netball court. Provide a recommendation on the suitable pavement for the proposed netball court.

1. INVESTIGATION:

The site investigation consisted of drilling eleven boreholes with depths of 1.5 metres and 4.0 metres with a mechanical auger. Dynamic cone penetrometer (DCP) testing was conducted adjacent to selected five boreholes to assess the consistency of the near surface soils for pavement design purposes. The approximate locations of the boreholes are shown on the attached sketch plan.

Although the natural soils were not encountered during the subsurface investigation the available geological maps consulted indicated that the site is in an area of Tertiary sediments.

2. FINDINGS:

The boreholes revealed that the existing soil profile consisted of silty SAND FILL with crushed ROCK, bricks and rubbish except for the sandy CLAY FILL layers noted in BH1, BH2, BH4 and BH11. The thickness of the sandy CLAY FILL noted is as follows:

Borehole	Depth range (mm)
BH1:	1400 - 1800
BH2:	900 – 1500
BH4:	800 – 1500
BH11:	800 – 1500

The sandy CLAY FILL also contained crushed gravels and occasional rubbish.

The DCP tests indicate that the near surface soils are of medium dense consistency suggesting that the sandy soils are moderately compacted. However, the age of the existing FILL and compaction regime of the entire FILL layer is unknown. It can be expected that there will be some differential settlements due to creep and minor slumping in the subsurface layers.

3. SITE CLASSIFICATION:

After considering the area geology, the soil profile encountered in the bores, the proposed development and the climatic zone of the area, this site has been classified as CLASS P with respect to foundation construction (Australian Standard 2870-2011 Residential Slabs and Footings) due to the depth of existing FILL. It is anticipated that the seasonal surface movement at this site will not exceed 40mm. However, this classification is technically not correct for the proposed type of structure, therefore is given as a guide only.

4. PROPOSAL:

It is understood that the proposal is to construct a netball court on this site. The recommendation provided in the subsequent section of the report assumes that the existing FILL on the site has attained full consolidation. It should be noted however, that some routine maintenance would be required for up-keep of the netball court should there surface movements due to creep and slumping.

It is understood that the netball court will be accessed by pedestrians only during its lifetime. There will however, be occasional construction equipment for the initial construction and maintenance.

The pavement profile has allowed for very light vehicle loading only.

5. RECOMMENDATIONS:

The existing surface within the proposed netball court area should be excavated to remove the existing root and organic zone. The exposed excavated surface should be given further surface compaction to eliminate any soft pockets. If there are soft pockets then this should be excavated and back filled with suitable site derived SAND and compacted to a minimum of 95% of AS1289 5.1.1 (Standard Compaction) followed by the construction of the pavement

	Place 10mm thick acrylic over the asphalt	Depth 00mm
SURFACING (30mm thick)	Asphalt Type L 10mm stone	30mm
BASE (100mm thick)	Class 2, Fine Crushed Rock Compacted to not less than 98% of AS 1289, 5.2.1 (Modified Compaction)	130mm
SUBBASE (100mm thick)	Class 3, Crushed Rock or Soft Ripped Rock Compacted to not less than 95% of AS 1289, 5.2.1 (Modified Compaction)	230mm
SUBGRADE	Material as found Compacted to 95% of AS 1289 5.1.1 (Standard Compaction) at a moisture content between 90% and 120% of Optimum Moisture Content for a depth of 150mm	



PATRICK OAI
SENIOR GEOTECHNICAL ENGINEER
CIVILTEST PTY LTD

Ref: MR/PO/rh

6 March 2017

LOCATION OF TEST SITES

SANDRINGHAM GOLF DRIVING RANGE



Denotes Test Holes

NOT TO SCALE

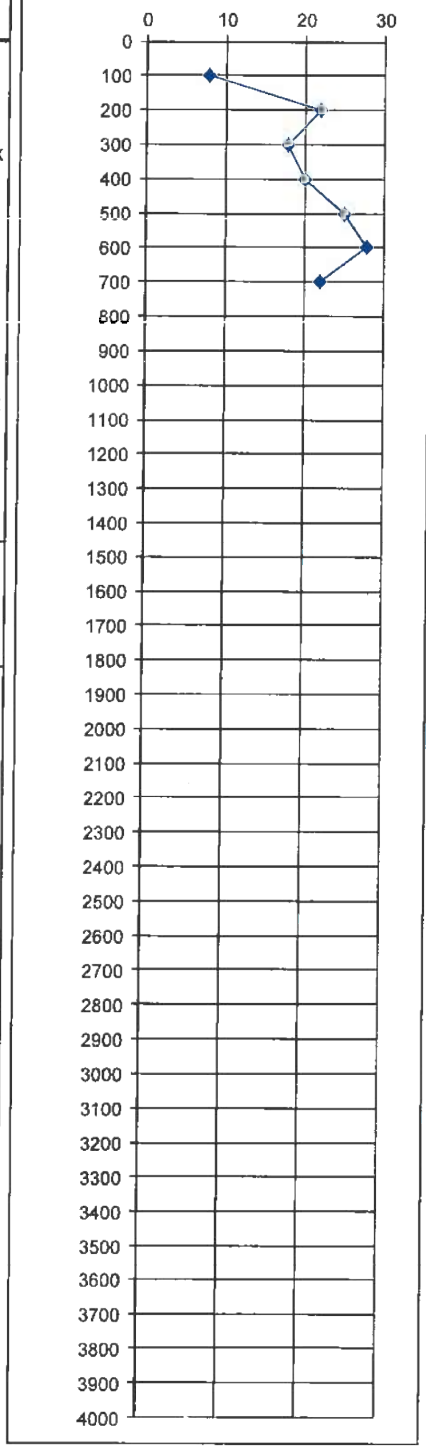
CIVILTEST P/L. **ENGINEERING LOG** Report Number: 1170139

Soil Testing & Geotechnical Consultants

CIV-DOC-001-011-SD2 ISSUE # 6 - 22 January 2015 **BORE HOLE 1**

Field Moisture Content (%)	Depth (m)	Soil Class	Test Methods: Moisture content: AS 1289.2.1.1; DCP CBR: AS 1289.6.3.2, RC 402.01	
			SAND, silty FILL Brown Dry Medium dense Occasional clay pieces and crushed rock throughout Crushed rock throughout at 0.900	FILL
	1.400			
	1.800		CLAY, sandy FILL Brown mottled grey orange, Moist Stiff, Occasional crushed rock gravels	FILL
			SAND, silty FILL Dark grey Moist Medium dense	FILL
			Rubbish throughout at 3.300	
	4.000		Stopped drilling due to rubbish	
			END OF BORE (27-02-17)	

Field C.B.R.



Ref: MR/rh

Test Hole No 2 Depth (m)	Classifi-cation	Shear Vane Strength kPa	Engineering Log	
0.900			SAND, silty FILL Brown Dry Medium dense Occasional clay pieces and crushed rock	FILL
1.500			CLAY, sandy FILL Brown mottled grey orange Moist Stiff Occasional crushed rock gravels and pieces of rubbish	FILL
			END OF BORE (27-02-17)	

CIVILTEST P/L. **ENGINEERING LOG** Report Number: 1170139

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BORE HOLE 3

Test Methods
Moisture content AS 1289.2.1.1
DCP CBR: AS 1289.6.3.2, RC 402.01

Field Moisture Content (%)	Depth (m)	Soil Class	Field C.B.R.	
				SAND, silty FILL Brown Dry Medium dense Occasional clay pieces and crushed rock FILL Crushed rock, bricks and rubbish throughout at 1.300
	1.500			END OF BORE (27-02-17)

Ref: MR/rh

Test Hole No 4 Depth (m)	Classification	Shear Vane Strength kPa	Engineering Log
0.800	x . . . x . . . x . . . x . . . x . . . x . . . x		SAND, silty FILL Grey Dry Medium dense Occasional gravels and clay pieces FILL
1.500	∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴		CLAY, sandy FILL Grey brown Moist to dry Stiff Occasional gravels FILL
			END OF BORE (27-02-17)

Test Hole No 5 Depth (m)	Classification	Shear Vane Strength kPa	Engineering Log	
			SAND, silty FILL Brown grey Dry Medium dense Gravels throughout Moist at 0.200 Rubbish throughout at 0.800	FILL
1.500				
			END OF BORE (27-02-17)	

Test Hole No 6 Depth (m)	Classification	Shear Vane Strength kPa	Engineering Log	
			SAND, silty FILL Grey brown Dry Medium dense Occasional gravels Gravels throughout at 0.350 Dark brown and moist at 0.950	FILL
1.500			END OF BORE (27-02-17)	

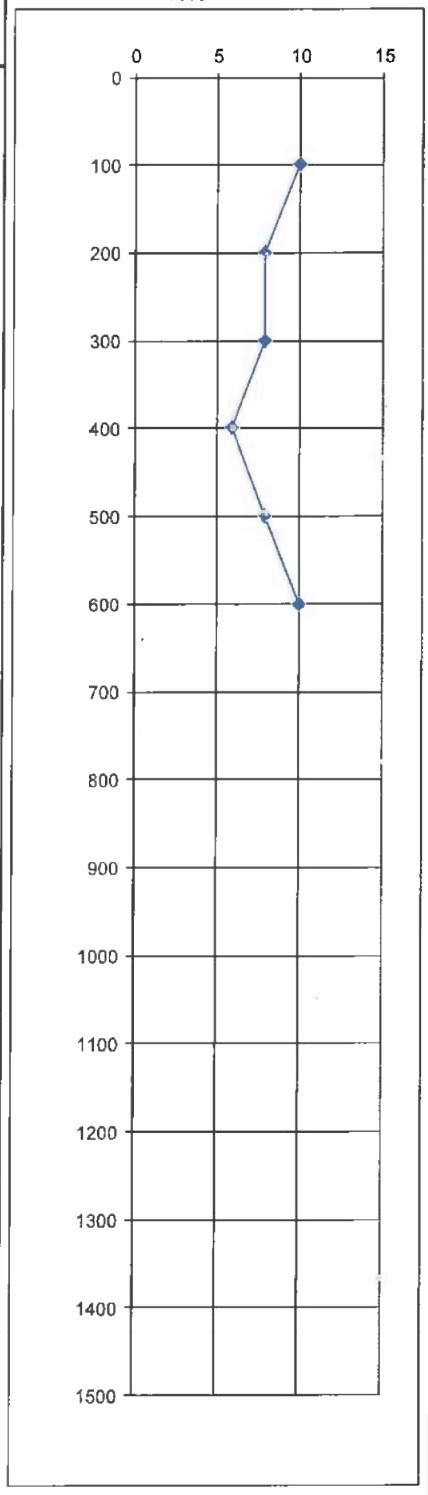
Test Hole No 7 Depth (m)	Classification	Shear Vane Strength kPa	Engineering Log	
			SAND, silty FILL Grey brown Dry Medium dense Occasional gravels	
			Gravels throughout at 0.500	
			Brown.and moist at 0.900	FILL
1.500				
			END OF BORE (27-02-17)	

CIVILTEST P/L. **ENGINEERING LOG** Report Number: 1170139

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BORE HOLE 8

Field Moisture Content (%)	Depth (m)	Soil Class	Field C.B.R.	Test Methods: Moisture content AS 1289.2.1.1; DCP CBR: AS 1289.6.3.2, RC 402.01
				SAND, silty FILL Grey Moist Medium dense Occasional gravels and clay pieces FILL Gravels throughout at 0.850
	1.500			END OF BORE (27-02-17)

Ref: MR/rh

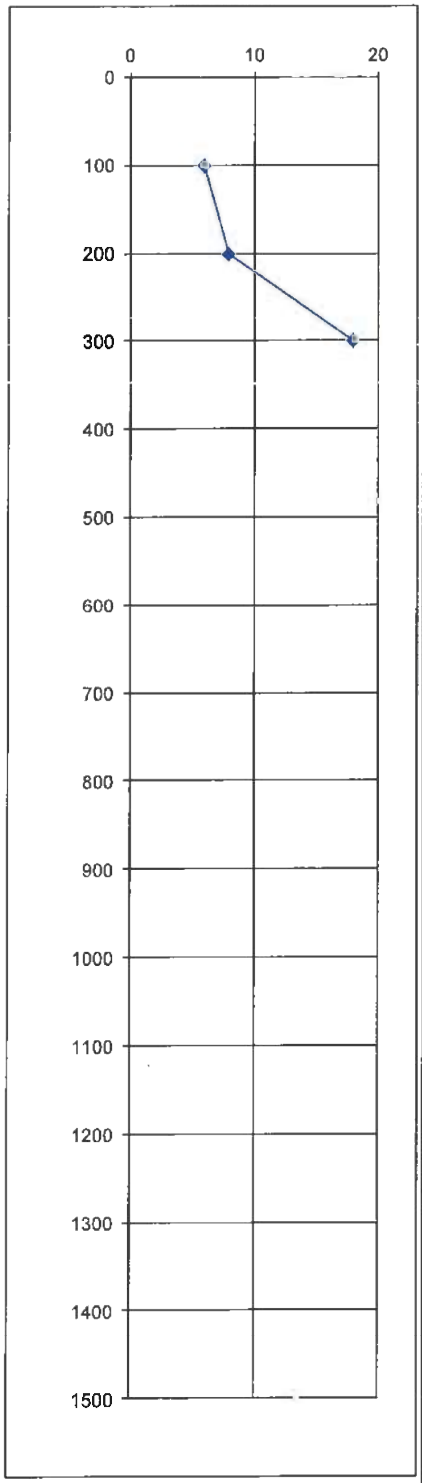
Test Hole No 9 Depth (m)	Classification	Shear Vane Strength kPa	Engineering Log	
			SAND, silty FILL Grey Dry Medium dense Occasional gravels	FILL
			Rubbish throughout at 0.400	
0.900			Stopped drilling due to rubbish	
			END OF BORE (27-02-17)	

CIVILTEST P/L. **ENGINEERING LOG** Report Number: 1170139

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BORE HOLE 10

Field Moisture Content (%)	Depth (m)	Soil Class	Field C.B.R.	Test Methods: Moisture content AS 1289.2.1.1; DCP CBR: AS 1289.6.3.2, RC 402.01
				SAND, silty FILL Grey Moist Medium dense Occasional gravels Gravels throughout at 0.350 FILL Rubbish throughout at 0.950
	1.500			END OF BORE (27-02-17)

Ref: MR/rh

Test Hole No 11 Depth (m)	Classifi-cation	Shear Vane Strength kPa	Engineering Log
0.800			SAND, silty FILL Grey Moist Medium dense Occasional gravels FILL
1.500			CLAY, sandy FILL Grey mottled brown Moist to dry Stiff Gravels throughout FILL
			END OF BORE (27-02-17)