Environmental Investigation

Lot 846, Gregory Hills Drive, Gledswood Hills NSW

Prepared for: Gregory Hills Corporate Park Pty Ltd

STC-76-10354 / EI1
v1 final
3rd May 2016

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ABBREVIATIONS

ACM	Asbestos Containing Material
ADE	A.D. Envirotech Australia Pty Ltd
ASS	Acid Sulphate Soils
AST	Above Ground Storage Tank
BGL	Below ground level
BR	Blind Replicate
BTEX	Benzene, toluene, ethyl-benzene, xylene
CN	Cyanide
COC	Chain of Custody
DEC	Department of Environment and Conservation
DQI	Data Quality Indicators
DQO	Data Quality Objectives
EI	Environmental Investigation
EILs	Ecological Investigation Levels
EPA	NSW Environmental Protection Agency
ESLs	Ecological Screening Levels
EUROFINS	Eurofins Environment Testing Australia Pty Ltd
GHCP	Gregory Hills Corporate Park
GILs	Groundwater Investigation Levels
HILs	Health Investigation Levels
HSLs	Health Screening Levels
LPI	Land Property Information
LTO	Land Titles Office
NATA	National Association of Testing Authorities
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSW EPA	New South Wales Environmental Protection Authority
OEH	Office of Environment and Heritage
OPPs	Organophosphorous Pesticides
OCPs	Organochlorine Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PASS	Potential Acid Sulphate Soils
PCBs	Polychlorinated Biphenyls
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
SCID	Stored Chemical Information Database
SH&EWMS	Safety Health and Environmental Works Method Statement
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit

EXECUTIVE SUMMARY

A.D. Envirotech Australia Pty Ltd (ADE) was commissioned by Mr Richard Harris, of Gregory Hills Corporate Park Pty Ltd (GHCP) to undertake an Environmental Investigation (EI) to assess the current level of contamination (if any) within the Site identified as Lot 846 DP1203104, located on Gregory Hills Drive, Gledswood Hills NSW (hereafter referred to as 'the Site').

It is proposed that the Site is to be developed into a hospital facility (refer to Appendix VI - Site Plans). Due to the fact that some fill material had been imported under a SSRRE for commercial/industrial land use, this investigation has been undertaken at the request of the client to determine if the Site is suitable for development as a hospital, specifically, by assessing the recently imported soils against the National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (NEPM 2013).

During the development of the Site, ADE has been involved in the Level 1 geotechnical supervision of the filling activities and determined that between 0.5-3.0 m of fill has been imported into Lot 846. The material that has been imported consists of Virgin Excavated Natural Material (VENM), Excavated Natural Material (ENM), and exempt material, i.e. material meeting the criteria of a Site Specific Resource Recovery Exemption (SSRRE).

Based on the criteria for the import of material into GHCP, ADE determined the likelihood of contamination within the fill material was low. ADE adopted a sampling density for a site of approximately 40,000 m^2, as recommended in the NSW Sampling Design Guidelines 1995.

Drilling operations were undertaken on the 31st of March and 1st of April 2016, under the supervision of a suitably experienced ADE environmental consultant.

A summary of Site observations are presented below:

- Site was completely vacant, with no vegetation or grass cover present;
- Two large stockpiles of topsoil were present in the northern sector of the site. ADE was advised by the client that these soils originated from within the site and would be placed in other areas of the GHCP, therefore these stockpiles were not included in the scope of the investigation;
- Fill materials were observed as a majority of silty clay, with gravelly silty clay, with underlying VENM materials consisting of orange/brown silty clay (medium plasticity);
- VENM was identified below the fill materials in all boreholes, noted as being shallow (<0.5 m BGL) in the north-eastern portion of the site to a maximum depth of approximately 3.0 m BGL in the southern portion of the site;
- Asbestos containing material (ACM) was not observed on the soil surface throughout the site or within any of the boreholes;
- Throughout the site the maximum PID reading was 8.8 ppm. All other samples recorded PID readings of less than 1.0 ppm;
- No hydrocarbon or malodorous odours were noted within any of the boreholes;
- No foreign materials were observed in any of the boreholes; and
- No sulfidic ores or any other indication of acid sulfate soils was observed within any of the boreholes.

A total number of 80 discrete primary soil samples from 48 boreholes located in a grid based sample pattern throughout the site were submitted for chemical analysis (excluding QA/QC samples). The full analytical program for each sample can be seen in Section 8 of this report.

Based on a review of the available desktop search data, Site observations during the DSI, results of analytical reports and the proposed future land use as a hospital, ADE concludes that:

- The potential for significant and/or widespread chemical contamination arising from historical land use activities on Site is considered to be low;

- The concentrations of chemical contamination detected within fill materials (0.0 – 3.0 m BGL) of the site meet the adopted site assessment criteria and do not pose an unacceptable risk to human health or ecological receptors;

- No asbestos containing materials were observed within the soil materials within any of the boreholes during the field works.

Based on the findings of the DSI, the concentrations of the potential contaminants within the soil samples collected were below the assessment criteria. It is the opinion of ADE that no significant contamination is present within the site, and the site is suitable for its proposed land use as a hospital.

1. INTRODUCTION

1.1 General Information and Background

A.D. Envirotech Australia Pty Ltd (ADE) was commissioned by Mr Richard Harris, of Gregory Hills Corporate Park Pty Ltd (GHCP) to undertake an Environmental Investigation (EI) to assess the current level of contamination (if any) within the Site identified as Lot 846 DP1203104, located on Gregory Hills Drive, Gledswood Hills NSW (hereafter referred to as 'the Site').

The Site was formed as part of the larger 'Gregory Hills Corporate Park', currently undergoing development in which fill material has been imported to the site to achieve the desired grade and levels. Due to the previously proposed land use of the site as commercial/industrial, some fill material was imported under a Site Specific Resource Recovery Exemption (SSRRE) granted by the NSW Environment Protection Authority (NSW EPA) under the premise that the Site would be used for commercial/industrial purposes.

It is proposed that the Site is to be developed into a hospital facility (refer to Appendix VI - Site Plans). Due to the fact that some fill material had been imported under a SSRRE for commercial/industrial land use, this investigation has been undertaken at the request of the client to determine if the Site is suitable for development as a hospital, specifically, by assessing the recently imported soils against the National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (NEPM 2013).

1.2 Objectives

The objectives of the investigation were to:

- Provide background on the site history with regards to the importation of fill material;
- Discuss the current Site condition;
- Design a soil investigation program in accordance with the New South Wales Environmental Protection Authority (NSW EPA) *Sampling Design Guidelines* (1995);
- Assess and describe the source, type, extent and level of contamination (if present) within the surface soils/fill materials throughout the site i.e. from soil surface to a maximum depth of fill material (approx 3.0 m BGL);
- Determine the human health and environmental risk (if present) from soils at the site;
- Determine if the land is suitable for its proposed future use as hospital; and
- Provide an assessment of Site contamination and recommendations for remediation and/or management (if required).

1.3 Scope of Work

The scope of work required to achieve the objectives of the investigation involved the following:

Phase One

- Completion of a site specific Safety, Health & Environment Work Method Statement (SH&EWMS);
- Review of available information with regards to imported fill; and
- Review of past and current activities on the site.

Phase Two

- Site inspection by an experienced environmental scientist;
- Drilling of 48 boreholes across the site in a grid based sampling strategy;
- Describe and log the soil stratigraphy encountered at each borehole;
- Sampling of material from the soil surface to a maximum depth of fill material, at any changes in soil stratigraphy or within any areas of apparent contamination;
- Field screening of collected samples for Volatile Organic Compounds (VOCs) using a Photoionisation Detector (PID); and
- Cold storage of all samples collected.

Phase Three

- Submission to a laboratory for analysis under chain of custody conditions;
- Laboratory analysis of selected soil samples for Total Recoverable Hydrocarbons (TRH); Benzene, Toluene, Ethylbenzene, Xylene (BTEX); Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine Pesticides (OCPs), Organophosphorus Pesticides (OPPs), Heavy Metals (As, Cd, Cr, Cu, Hg, Pb, Ni, Zn), Polychlorinated Biphenyls (PCBs), pH and Cation Exchange Capacity (CEC); and
- Preparation of an EI report outlining the investigation methodology, interpretation of the site data (results), recommendations and conclusions.

1.4 Legislative, Regulation, Guideline and Code of Practice Requirements

The analytical plan, field works and reporting outlined in this report has been undertaken in accordance with:

- Australian Standard AS 4482.1 Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds;
- Australian Standard AS 4482.2 Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances;
- Department of Environment and Conservation (DEC) Guidelines for the NSW Site Auditor Scheme (2006);
- National Environmental Protection Council (NEPC) Assessment of Site Contamination, National Environment Protection (Assessment of Site Contamination) Measure (1999), 2013 Amendment (NEPM 2013);
- NSW EPA Guidelines for Consultants Reporting on Contaminated Sites (2000); and
- NSW EPA Sampling Design Guidelines (1995).

1.5 Whole Report

No one section or part of a section, of this report should be taken as giving an overall idea of this report. Each section must be read in conjunction with the whole of this report, including its appendices and attachments.

2. SITE HISTORY AND PREVIOUS INVESTIGATIONS

2.1. Previous Reports

2.1.1. Douglas Partners Report 76510.01, 'Phase 2 Contamination Assessment, Proposed Subdivision, Lot 701, DP115472, Gregory Hills Drive, Glesdwood Hills NSW', dated February 2012.

Prior to the commencement of the development of the subdivision, Douglas Partners Pty Ltd (DP) undertook a Phase 2 contamination assessment of the larger site, Gregory Hills Corporate Park. The Report is summarised as follows.

The site history indicates that the land has only been used for the grazing of cattle up until the recent development of the adjacent Gregory Hills Drive and sewer infrastructure within the site. No areas of environmental concern (AEC) were identified within the site and as such a lower sampling density was implemented for intrusive works.

A total of 29 test pits were conducted across the site, encountering mainly topsoil, residual clay and shale, with some fill associated with Gregory Hills Drive, appearing to be reworked natural material. Five stockpiles within the site were also investigated. All samples collected from fill, natural materials and stockpiled material were within the site assessment criteria. Asbestos was not observed or detected within the analysed soil samples.

As no soil contamination was encountered and no offsite potential sources of contamination, groundwater investigations were not deemed necessary.

Based on the finding of the investigations it was concluded that no remedial works were necessary and the site was suitable for the proposed commercial and light industrial land use.

2.1.2. ADE Report GRH-02-10385 / ENV1 / v1 final, 'Review of Imported Soil Materials and Gate Check sampling, Stage 3, Gregory Hills Corporate Park, Gregory Hills Drive, Gledswood Hills NSW', dated the 4th of April 2016.

As per the scope of works issued to ADE by the client provided, a desktop review of waste classification reports (or equivalent) accompanying soil materials from a source site was undertaken to determine if contamination, salinity and aggressivity characteristics of the soils met the requirements of the GHCP FMP.

Prior to the 19th of January 2013, DP was engaged by the client to undertake the review and approval of soils prior to importation into GHCP. As of the 19th of January 2013, ADE was commissioned by the client to undertake the review and approval role. The waste classifications certificates and any associated reviews are available on request. Gate check samples were analysed for contamination assessment, salinity, aggressivity and asbestos to determine if the materials meet the minimum 'acceptance' requirements as per the GHCP FMP.

In regards to the contamination assessment of gate check samples, ADE was directed by the client to determine if the samples collected were below site assessment criteria as outlined in the GHCP FMP, specifically 'Table B1 - Threshold Contaminant Values for Commercial / Industrial Land use'.

Throghout the period, five samples were identified with exceedances in the FMP criteria with regards to either pH or salinity (ECe) requirements. It was concluded by ADE that due to the blending of material on site to meet compaction requirements, the exceedances were not deemed significant and would not affect the future development of the site.

2.2. Site History and Desktop Review

During the development of the Site, ADE has been involved in the Level 1 geotechnical supervision of the filling activities and determined that between 0-3.0 m of fill has been imported into Lot 846. The material that has been imported consists of Virgin Excavated Natural Material (VENM), Excavated Natural Material (ENM), and exempt material, i.e. material meeting the criteria of a Site Specific Resource Recovery Exemption (SSRRE). **Table 1**, below shows the criteria for classification as VENM, ENM and the SSRRE for importation in GHCP.

Table 1. Criteria assigned for VENM, ENM and SSRRE for import into GHCP.

Analytes	Virgin Excavated Natural Material	Excavated Natural Material (ENM)		Site Specific Resource Recovery Exemption (SSRRE)	
	Background Ranges, mg/kg	Maximum average concentration, mg/kg	Absolute maximum concentration, mg/kg	Maximum average concentration, mg/kg	Absolute maximum concentration, mg/kg
Arsenic	1-50	20	40	N/A	135
Cadmium	1	0.5	1	1	1.5
Chromium	5-1000	50	100	75	150
Copper	2-100	100	200	150	300
Lead	2-200	50	100	N/A	300
Mercury	0.03	0.5	1	0.5	1.5
Nickel	5-500	30	60	-	80
Zinc	10-300	150	300	250	500
EC	-	1.5 dS/m	3 dS/m	1.5 dS/m	3 dS/m
pH [(1)]	-	5 to 9	4.5 to 10	5 to 10	4.5 to 11
$C_6 – C_{10}$ hydrocarbons	-	-	-	-	-
C_{10}- C_{34} hydrocarbons	-	250	500	350	500
Benzene	-	-	0.5	N/A	0.5
Toluene	-	-	65	N/A	65
Ethyl-benzene	-	-	25	N/A	25
Xylenes (total)	-	-	N/A	N/A	15
Benzo(a)pyrene	-	0.5	1	1	2
PAH total	-	20	40	20	40
RTA Foreign Materials (Type III)[(2)]	-	0.05%	0.10%	-	-
Glass metals and rigid plastic	-	-	-	0.1%	0.3%
Plastics – light flexible film	-	-	-	0.05%	0.1%

As the material imported under a SSRRE has been imported under the condition that the site is used for commercial/industrial purposes, ADE considers further investigation is warranted to validate the material meets Health Investigation Level-A /Health Screening Level-A, as per NEPM 2013, as is recommended for sensitive land uses (i.e. hospital or childcare centre), regardless of the planning zoning.

3. SITE IDENTIFICATION AND PHYSICAL SETTING

3.1. Site Location

The site is located on at the corner off The Hermitage Way, Gledswood Hills NSW, as is shown in **Figure 1** below:

Figure 1. Aerial photograph of the site (Photograph adapted from NearMap; accessed on 30.03.2016).

3.2. Site Identification and Description

Table 2. Summary of Site Identification Details

Site Details	
Site address	Gregory Hills Drive, Gledswood Hills NSW
Site/investigation area	Approximately 41,480 m^2
Current site use	Vacant property
Local Government Authority	Camden Council
Land Use Zoning	Commercial/Industrial

3.2.1. Current Land Use

The site is currently vacant, after being recently developed as part of the larger development 'Gregory Hills Corporate Park'. The area of Lot 846 covers approximately 41,480 m^2. Photographs from the site inspection on the 31st of March and 1st of April 2016 can be seen in Appendix I – Photographs.

3.2.2. Surrounding Land Use

To the north and west of the Site is the remainder of the development site, i.e. 'Gregory Hills Corporate Park', undergoing various construction and filling activities. To the east of the site are newly developed residential properties and to the south is Gregory Hills Drive, followed by various commercial and residential properties.

3.2.3. Key Site Observations

As mentioned, the site was vacant at the time of the inspection by ADE. Service pits for a newly installed sewer main were observed on the eastern and western boundaries of the site (refer to Appendix VII – Dial Before you Dig).

Two large stockpiles were observed in the north eastern and north western corners of the site. ADE was advised by the client that the stockpiles were topsoil to be used in other areas of the site. The stockpiles were therefore deemed outside the scope of the report.

3.2.4. Ground Cover and Vegetation

Exposed soil was observed throughout the site, with the exception of the two areas with stockpiled topsoil. No grass cover or vegetation was present within the site.

3.2.5. Site Topography and Drainage

The site is generally very flat, with a slight slope towards the western boundary of the site. The site is situated at an elevation of approximately 99-101 m AHD. The topography slopes gently down to the west of the site. The nearest water body is South Creek located approx. 400 m to the north.

3.2.6. Hydrogeology

It was beyond the scope of work to study the groundwater flow direction. However the local groundwater flow is likely to have a westerly direction towards Caddies Creek which is located approx 500 m to the west.

A search for registered groundwater wells within a 500 m radius of the site was undertaken by ADE via the NSW Department of Primary Industries, Office of Water (All Groundwater map). No groundwater bores were found within the 500 m radius. No groundwater quality data with regard to contaminants of concern were available within the search area.

No groundwater was encountered during the site investigations (refer to Appendix IV – Borehole Logs and Soil Stratigraphy).

3.2.7. Local Geology and Soil

The site is located on the Blacktown soil landscape (bt) as indicated on the Sydney 1:100000 geological map, 9130, prepared by the Soil Conservation Services of NSW.

The topsoil (A1 horizon) is described as being a friable brownish-black loam to clay loam with moderately pedal sub-angular blocky structure and rough-faced porous ped fabric. The pH ranges from slightly acidic (5.5) to neutral (7.0). Rounded iron indurated fine gravel-sized shale fragments and charcoal fragments are sometimes present. Roots are common.

Below the topsoil there is a hard setting brown clay loam to silty clay loam with apedal massive to weakly pedal structure and slowly porous earthy fabric. It commonly occurs as an A2 horizon. The pH ranges from moderately acidic (pH 5.0) to slightly acidic (pH 6.5). Platy ironstone gravel sized shale fragments are common. Charcoal fragments and roots are rarely present.

The B horizon is a brown light to medium clay with strong pedal polyhedral or subangular blocky structure and smooth faced dense ped fabric. The pH ranges from strongly acidic (pH 4.5) to slightly acidic (pH 6.5). Fine to coarse gravel-sized shale fragments are common and widespread and often occur in stratified bands. Both roots and charcoal fragments are rare.

The sediments are underlain by the Wianamatta Group formation – Ashfield Shale consisting of laminite and dark grey siltstone and Bringelly Shale which consists of shale, with occasional calcareous claystone, laminite and coal.

3.2.8. Acid Sulfate Soils

As the fill material imported in GHCP was assessed against either VENM, ENM or a SSRRE prior to importation, the fill material within Lot 846 is not expected to contain Acid Sulphate Soils (ASS). Inspection of the material during intrusive investigations did not reveal any signs of Potential Acid Sulphate Soils (PASS) such as staining or odours. No further investigation with regards to acid sulphate soils was deemed necessary.

4. DATA QUALITY OBJECTIVES

The Environmental Investigation works were designed using Data Quality Objectives (DQO) as defined by the US EPA and the NSW EPA in the *Guidelines for the NSW DEC Site Auditor Scheme* (2006, 2nd Edition), and AS 4482.1 (2005). The DQO process consists of a seven step planning approach to facilitate the development of qualitative and quantitative statements that specify the quality of the data required to support decision making within the scope of the investigation. This process utilises systematic planning and statistical hypothesis testing to differentiate between two or more clearly defined alternatives.

4.1. Statement of Problem

Objective	Provide advice on the nature and extent of contamination (if any) at the site and determine the potential risk posed to human health and the environment.
Contamination Issue	Potential contamination at the site is associated with the historical use of the site.
Project Team	GHCP: Richard Harris ADE Managing Director: Ross Nefodov ADE Project Manager: Matthew Toole ADE Environmental Scientist: Samuel Rouse
Conceptual Model	The **Site Conceptual Contamination Model** is included in **Section 5** of this report.
Resources & Project Timeframes	The ADE project team is listed above. The fieldworks and reporting components of the Environmental Investigation were completed in March and April 2016.
Community Concerns	The key community groups include: • Residents in neighbouring areas; • Local businesses and services; and • Utilities providers.
Regulatory Authorities & Local Government	NSW EPA and Camden Council

4.2. Identification of Decision

Principle Study Question	• Are contaminant concentrations of the contaminants of potential concern (COPC) (identified in **Section 5** of this report) on the site in excess of the NSW EPA - endorsed acceptance criteria? • Are contaminant concentrations of the COPC's in excess of the relevant Tier 1 site assessment criteria as outlined in NEPM *Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater (1999), 2013 Amendment?* • Have the investigative works been undertaken in accordance with the *NSW EPA Guidelines for Consultants Reporting on Contaminated Sites (2000)* and *NSW EPA Sampling Design Guidelines (1995)*?

Action Resolutions	Two alternative actions could result from the resolution of the principle study question: • If the concentrations of any contaminant on the site exceeds the acceptance criteria, the action may be to remove/remediate the contaminated soil or conduct further investigations (Tier 2 Assessment); and • If the concentrations of any contaminants on the site do not exceed the acceptance criteria, no action will be taken.
Decision Statement	Define whether or not the 95% Upper Confidence Limit (95% UCL) of the arithmetic average concentrations of the COPC (identified in **Section 5** of this report) on the site exceed the acceptance criteria and require remediation. It is assumed that the Site would be suitable for the proposed use if the soil contaminant concentrations meet the adopted guideline values.

4.3. Identification of Inputs to Decision

The main parameter inputs that were required to resolve the decision statement for the investigation were identified to be:

Soil Condition	• Use of field investigation techniques to identify previously undocumented areas of contamination within the site (i.e. boreholing); • Visual inspection of soil conditions and indicators of soil contamination (i.e. vegetation); and • Collection and analysis of representative soil samples from borehole locations.
Aesthetic Condition	Aesthetic impacts within soil resulting from the concentrations of contaminants (i.e. odour, discolouration, stained materials).
Contaminant Extent	Identification of contaminant types and sources, distribution within the site and the surrounding areas (if applicable).
Toxicity	The toxicity of the contaminants of concern and their respective environmental persistence.
Receptors	Identification of potential receptors (both on and off site).
Exposure Pathways	The assessment of exposure pathways including conceptual fate and transport modelling of potential contaminants.
Site Criteria	NSW EPA endorsed acceptance criteria as outlined in **Section 6.**

4.4. Definition of Study Boundaries

A detailed description of the spatial and temporal boundaries of the problem, characteristics that define the population of interest and any practical considerations for the study:

Geographical Limit	The spatial boundary of the site is indicated in **Figure 1**.
Investigation Limit	• The limit of the investigation extent was defined by the number of sampling locations. A total of 48 boreholes/test pits were undertaken across the site with a systematic, grid based sampling method. • The target for investigation was fill materials throughout the site i.e. from soil surface to a depth of approximately 3.5 m BGL. • Soil sampling/testing was undertaken as outlined in the scope of work.
Constraints	• Time; and • Costs.
Receptors of Concern	The potential receptors of concern are outlined in **Section 5** of this report.

4.5. Development of Decision Rule

Definition of the statistical parameters, relative action levels and specification of the acceptance criteria for QA/QC validation results:

Statistical Parameters	ADE concluded that the 95% UCL of the arithmetic average concentrations of contaminants would be the most appropriate statistical parameter.
Relative Action Levels	The relative action levels for the decision were the NEPM *Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater (1999), 2013 Amendment.* If the maximum concentrations of the analytes tested are above their acceptance criteria, then the soil will be considered potentially contaminated warranting further investigations and/or management and may be recommended to be disposed of at a NSW EPA approved landfill. Alternatively if the 95% UCL of the arithmetic average concentrations of the analytes tested are below their acceptance criteria, then no action will be taken.
Acceptance Criteria for QA/QC	The assigned criteria for QA/QC samples to ensure the validity of results is outlined below: • Laboratory duplicate samples 95% • Laboratory blank samples 100% • Laboratory spike/surrogate recoveries 95% • Laboratory control (split) samples 75% • Blind replicate samples 75% • Rinsate samples 75% • Trip blank samples 95% • Spike BTEX samples 75% Subsequent to an overall completeness of 95%, the data collected through the course of the investigation will be considered valid and acceptable.

4.6. Specification of Tolerable Limits on Decision Errors

Defines how the quality of the data collected by the Limited Phase II Detailed Site Investigation is to be assessed. These criteria are summarised below:

Documentation & Data Completeness	• Site conditions properly described. • Sampling locations properly described and located. • Completion of field records, chain of custody documentation, laboratory test certificates from NATA-registered laboratories. • Samples are collected from all areas of potential environmental concern within the subject site. • Samples are tested for a selection of potential contaminants of concern. • A minimum of 95% completeness for the overall site investigation.
Data Comparability	• Use of appropriate techniques for the sampling, storage and transportation of samples. • Implementation of NATA certified laboratory using analytical procedures as outlined in NEPM 2013. • Use of secondary NATA certified laboratory for split samples.
Data Representativeness	• Collection of representative samples from each sampling location. • Collection of representative samples from across the site. • Use of appropriate techniques for sampling, storage and transportation of samples.
Precision for Sampling and Analysis	• Use of appropriately trained and qualified field personnel. • Use of appropriate laboratory quality analysis assessment (i.e. blind replicates, split samples). • Relative Percent Difference's (RPD's) to be less than 30% for inorganic and 50% for organic analytes. • Acceptable outputs of trip blank and spike samples. • Acceptable quality of rinsate sample results.
Accuracy for Sampling and Analysis	• Satisfy laboratory QC criteria of 95%. • Trip blanks and rinsate sample results returned with no contamination. • All laboratory duplicate samples within acceptable ranges. • All control results within acceptable ranges.
Types of Decision Errors	The planning team determined that the two decision errors were: i) deciding that soil and water on site is contaminated when it truly is not, and ii) deciding that soil and water on site is not contaminated when it truly is. The true state of nature for decision error (i) is that soil is not contaminated. The true state of nature for decision error (ii) is that soil is contaminated.

4.7. Data Collection Design

The organisation of the data collection and analysis design, for optimising the generation of data to satisfy the DQOs and the objective of the investigation has been achieved via the following:

Pre-approved Work Plan	The sampling, analysis and quality plan for the investigation at the site has been developed to assess the concentrations of contaminants present in recently imported fill material (approx 0-3.0 m BGL) at the site through the implementation of the components outlined within AS 4482.1 (2005) and AS/NZS 5667.1 (1998). 3.5 m BGL was identified as the maximum depth of fill material imported into the site, therefore the investigation would extend to a maximum depth of VENM material.
Compliance with EPA Guidelines	• Use of appropriate techniques for the sampling, storage and transportation of samples. • Implementation of NATA certified laboratory using analytical procedures as outlined in NEPM 2013. • Use of secondary NATA certified laboratory for split samples.

5. CONCEPTUAL SITE MODEL

5.1. Potential Contamination Types

The following potential types of contaminants for the Site investigated in this EI are summarised below in **Table 3**.

Table 3. Sources and types of contaminants that may be present on site.

Potential source of contamination	Location (refer to Figure 3)	Contaminants of Potential Concern (COPC)	Likelihood
Imported fill material	Throughout site	Metals, TRH, BTEX, OCPs/OPPs, PAHs, PCBs	Low

5.2. Primary Transport Mechanisms

Primary transport mechanisms for the migration of potential contaminants on to the Site or off the Site include:

- Airborne particulates due to wind turbulence events;
- Surface water runoff and storm water drainage;
- Downward migration and leaching via infiltration of rain water into the soils; and
- Lateral migration via groundwater.

5.3. Potential Contamination Receptors

The main potential contamination receptors were considered to include:

5.3.1.Human Health – Direct Contact & Ingestion

It is considered appropriate to assess whether a source of potential exposure from a contaminant of concern via the direct contact and ingestion pathway exists for commercial workers and Site visitors may be present on Site.

5.3.2.Human Health – Inhalation / Vapour Intrusion

It is considered appropriate to assess whether a source of potential exposure from a contaminant of concern via the vapour intrusion pathway exists for commercial workers and Site visitors may be present on Site.

5.3.3.Aesthetics

An assessment of aesthetics will be made during intrusive works. This is further discussed in Section 6.8.

5.3.4. Ecological Ecosystems

The proposed development will include areas for landscaping within the site. Based on this, it considered that further assessment of the potential risk to terrestrial ecosystems is warranted.

5.4. Site Conceptual Contamination Model

Table 4 below presents the information from above, the sources of COPC, their pathways and receptors into a tabular format.

Table 4. Site Conceptual Model

Contamination Source	Pathway	Receptor
Imported fill material for commercial/ industrial use	Dermal contact/ingestion from COPC in surface soils	• Visitors to the site • Future users of the site • Ecological communities

6. SITE ASSESSMENT CRITERIA

The criteria specified in the following publications were used for the site assessment:

- *Assessment of Site Contamination, National Environment Protection (Assessment of Site Contamination) Measure* (1999), 2013 Amendment*; and*

The report applies the relevant investigation levels to identify contaminants and/or areas of contamination that potentially pose a risk to human or environmental health.

6.1. Health Investigation Levels (HILs)

The NEPM 2013 guidelines stipulate four generic land use settings for assessment used in the first stage (Tier 1 or 'screening') of potential risks to human health from a broad range of metals and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure for the following generic land use settings:

- **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

- HIL D - Commercial/industrial such as shops, offices, factories and industrial sites.

As per NEPM 2013: "The HILs developed for the commercial/industrial land use scenario are not applicable to a site used frequently by more sensitive groups such as children (within childcare centres, hospitals and hotels) and the elderly (within hospitals, aged care facilities and hospices)."

Therefore, although the land is zoned as commercial/industrial, based on the information provided to ADE outlining the scope of the proposed development i.e. hospital with open landscaping areas, HIL-A has been adopted as the initial Tier 1 screening criteria (refer to Appendix VI – Site Plans).

6.2. Health Screening Levels (HSLs)

HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. The HSLs depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structures. ADE has adopted the NEPM 2013 Tier 1 screening criteria for BTEX, Naphthalene, TRH fractions C_6-C_{10} and C_{10}-C_{16} for Vapour Intrusion and direct contact.

NEPM 2013 states that irrespective of the planning zoning of a site, if the land is to be used for sensitive purposes (i.e childcare/hospital) HSL-A should be applied. The following HSLs for soil vapour intrusion and direct contact have been selected:

- HSL-A and HSL-B (Low / High Density Residential);
- Intrusive Maintenance Worker

The adopted HSLs from Table 1A(3), Schedule B1 of NEPM 2013, Table B3, Appendix B, CRC CARE Technical Report No. 10 (Intrusive Maintenance Worker) and Table B4, Appendix B, CRC CARE Technical Report No. 10 (Intrusive Maintenance Worker) are shown in **Table 7** below.

6.3. Management Limits

'Petroleum hydrocarbon management limits' ('management limits') are a set of assessment criteria outlined in NEPM 2013 applicable to petroleum hydrocarbon compounds which aim to avoid or minimise the potential effects of:

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

The adopted Management Limits from Table 1B (7), Schedule B1 of NEPM (2013) are shown in **Table 7**.

6.4. Ecological Investigation Levels (EILs)

As per the NEPM 2013:

"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. EILs have been derived for As, Cu, CrIII, DDT, naphthalene, Ni, Pb and Zn".

6.5. Steps to determining the site specific EILs for Ni, Cr III, Cu, Zn and Pb aged contamination (>2 years), as per NEPM Schedule B1

1. Measure or analyse the soil properties relevant to the potential contaminant of concern. Sufficient samples need to be taken for these determinations to obtain representative values for each soil type in which the contaminant occurs.

2. Establish the sample ACL for the appropriate land use and with consideration of the soil-specific pH, clay content or CEC. The ACL for Cu may be determined by pH or CEC and the lower of the determined values should be selected for EIL calculation. Note that the ACL for Pb is taken directly from Table 1(B)4.

3. Calculate the contaminant ABC in soil for the particular contaminant and location from a suitable reference site measurement or other appropriate method.

4. Calculate the EIL by summing the ACL and ABC:

$$EIL = ABC + ACL$$

Three samples were selected for analysis of physicochemical properties (pH, CEC) in order to derive EILs. Results are shown in **Table 5**, below.

Ambient background concentration, were taken from previous report Douglas Partners 76510.01. Test Pit location 5 from the DP report was used due to its proximity to the current Lot 846, and it was reported as a background sample. Site specific EILs were calculated using mean concentrations of parameters presented in **Table 5** to determine the added ACLs in conjunction with the appropriate ABC. Clay content was not assessed; therefore the 'most conservative assessment criteria' for the ACL of chromium was adopted. ACLs were derived for Urban Residential/Open Space (equivalent to HIL-A/HSL-A).

Table 5. Sample results from upper fill material (0.0-3.0 m BGL) for derivation of added contaminant limit.

Sample I.D	CEC (meq/100g)	pH	Clay Content (5)
BH25.C	17	5.9	NT
BH34.C	15	5.1	NT
BH42.A	15	5.1	NT
Average	**16**	**5.4**	**-**

Table 6. Derivation of EILs using ambient background concentration and added contaminant limit.

Contaminant	Ambient Background concentration	Added Contaminant Limit	Ecological Investigation Level
As	8	-	**100**
DDT	<0.3	-	**180**
Naphthalene	<0.5	-	**170**
Pb	29	1100	**1129**
Cu	14	170	**184**
Ni	11	270	**281**
Cr III	32	190	**222**
Zn	37	270	**307**

6.6. Ecological Screening Levels (ESLs)

Ecological screening levels (ESLs) are presented based on a review of Canadian guidance for petroleum hydrocarbons in soil and application of the Australian methodology (Schedule B5b) to derive Tier 1 ESLs for BTEX, Benzo(a)pyrene and F1 and F2 (Warne 2010a, 2010b). The Canadian Council of the Ministers of the Environment (CCME) has adopted risk-based TPH standards for human health and ecological aspects for various land uses in the Canada-wide standard for petroleum hydrocarbons (PHC) in soil (CCME 2008) (CWS PHC). The standards established soil values including ecologically based criteria. The above guidelines have

been used to determine the ESLs in NEPM 2013, the guidance document ADE has adopted to complete this investigation.

6.7. Asbestos

Based on the history of the material imported into site, no asbestos is expected to be encountered within the fill material. For the purpose of this investigation, ADE adopted an initial screening of 'no visible asbestos containing materials observed' as screening criteria during the Site investigation.

6.8. Acid Sulfate Soils

As discussed previously all imported materials are assessed against ENM, VENM or SSRRE criteria, with prior assessment on the potential for ASS or PASS. Therefore acid sulphate soils are not expected to be encountered within the imported fill materials. No further investigation or analysis is deemed necessary.

6.9. Aesthetics

NEPM 2013 requires that aesthetic quality of accessible soils be considered even if analytical testing demonstrates that concentrations of COPCs are within the SAC.

It should be noted that there are no quantifiable guidelines in determining if soils are appropriately aesthetic, however the NEPM 2013 does indicate that professional judgement with regard to quantity, type and distribution of foreign materials and/or odours in relation to the specific land use should be employed.

The following scenarios (but not limited to) would trigger further aesthetic assessment:

- Hydrocarbon sheen on surface water;
- Anthropogenic soil staining; and
- Odorous soils i.e. petroleum hydrocarbon odours or hydrogen sulphide in soil.

6.10. Statistical Analysis

A contaminant concentration in soil will be deemed acceptable if:

- The maximum concentration of all samples meet the specified acceptance criteria; or
- The 95% UCL average concentration of each contaminant is below the acceptance criteria;
- The standard deviation of the mean is less than half the assessment criteria; and
- No individual exceedance is greater than 2.5 times the acceptance criteria.

If a location is found to have more than two and half times (2.5x) a contaminant's acceptable limit, then it will be classified as a "hot-spot", requiring further assessment, remediation, removal or management.

If the calculated 95% UCL of the arithmetic average concentration of the contaminant is above their acceptance criteria, then the soil will be considered contaminated, requiring further assessment, remediation, removal or management.

If the 95% UCL of the arithmetic average concentrations is below the acceptance criteria, and no concentrations are at a "hotspot" level (not two and a half times the health based investigation level criteria), slight elevations above the acceptance criteria may be considered to pose an insignificant human health or environmental risk since most of the site will be covered by concrete and road-base.

Table 7. Site Assessment Criteria for soil contamination, mg/kg (unless otherwise specified)

Substances	Ecological Investigation Levels (EILs) [6]	Ecological Screening Levels (ESLs)	Health Investigation Levels (HILs)[1]	Health Screening Levels (HSLs)[3]			Management Limits
	EIL – Urban Residential -	Urban Residential (mg/kg)	Residential (A) (mg/kg)	Vapour Intrusion – Residential (A) (mg/kg)	Screening Levels Intrusive Maintenance Worker (Shallow Trench) for Vapour and Direct Contact, 0m to <2m[4] (mg/kg)	Direct Contact – Residential (High-Density) (A) (mg/kg)	Residential, parkland and public open space (Fine Soils) (mg/kg)
Arsenic (total)	**100**	-	**100**	-	-	-	-
Cadmium	-	-	**20**	-	-	-	-
Chromium (Total)	**222**	-	**100**	-	-	-	-
Copper	**184**	-	**6,000**	-	-	-	-
Lead	**1100**	-	**300**	-	-	-	-
Mercury (inorganic)	-	-	**40**	-	-	-	-
Nickel	**281**	-	**400**	-	-	-	-
Zinc	**307**	-	**7,400**	-	-	-	-
Polycyclic aromatic hydrocarbons (PAHs)	-	-	**300**	-	-	-	-
Carcinogenic PAHs (as BaP TEQ)[2]	-	-	**3**	-	-	-	-
Phenols	-	-	**3,000**	-	-	-	-
DDT+DDE+DDD	**180**	-	**240**	-	-	-	-
Aldrin and Dieldrin	-	-	**6**	-	-	-	-
Chlordane	-	-	**50**	-	-	-	-
Endosulfan	-	-	**270**	-	-	-	-
Endrin	-	-	**10**	-	-	-	-
Benzo(a)pyrene	-	**0.7**	-	-	-	-	-
Heptachlor	-	-	**6**	-	-	-	-
Methoxychlor	-	-	**300**	-	-	-	-
Chlorpyrifos	-	-	**160**	-	-	-	-
PCBs (Total)	-	-	-	-	-	-	-
Trichloroethylene[7]							
Trichloroethane[7]							
Tetrachloroethylene[7]							
Cis-1,2-dichloroethene[7]							
Vinyl chloride[7]							
Benzene	-	**65**		**0.7**	**350**	**140**	-

Table 7. Continued…

Substances	Ecological Investigation Levels (EILs) [6]	Ecological Screening Levels (ESLs)	Health Investigation Levels (HILs)[1]	Health Screening Levels (HSLs)[3]			Management Limits
	EIL – Urban Residential -	**Urban Residential** (mg/kg)	**Residential (A)** (mg/kg)	**Vapour Intrusion – Residential (A)** (mg/kg)	**Screening Levels Intrusive Maintenance Worker (Shallow Trench) for Vapour and Direct Contact, 0m to <2m[4]** (mg/kg)	**Direct Contact – Residential (High-Density) (A)** (mg/kg)	**Residential, parkland and public open space (Fine Soils)** (mg/kg)
Toluene	-	**105**	-	**480**	-	**21,000**	-
Ethyl Benzene	-	**125**	-	-	-	**5,900**	-
Xylene	-	**105**	-	**110**	-	**17,000**	-
Naphthalene	**170**	-	-	-	-	**2,200**	-
TRH: $C_6 – C_{10}$ (F1)[5]	-	**180**	-	**50**	-	**5,600**	**800**
TRH: C_{10}-C_{16} (F2)	-	**120**	-	**280**	-	**4,200**	**1000**
TRH: C_{16}- C_{34} (F3)	-	**1300**	-	-	-	**5,800**	**3500**
TRH: $C_{34} – C_{40}$ (F4)	-	**5600**	-	-	-	**8,100**	**10000**

Notes to table

1- Human exposure settings based on land use have been established for HILs (see Taylor and Langley 1998). These are:
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 & sensitive land uses (for details on derivation of HILs for human exposure settings based on land use see Schedule B(7A).
2- Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their Toxic Equivalency Factor (TEFs) (potency relative to B(a)P). The B(a)P TEQ (Toxic Equivalency Quantity) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF.
3- Health Screening Levels (HSL) for surface soils 0 m to <1 m where applicable.
NL Not Limiting.
4- Most conservative criteria adopted outlined for vapour risk and direct contact. Values adopted for 'Clay' where applicable for screening purposes.
5- To obtain F1, subtract the sum of BTEX from the C_6-C_{10} fraction.
6- Calculated as per the Assessment of Site Contamination, National Environment Protection (Assessment of Site Contamination) Measure (1999), 2013 Amendment.
7- Laboratory detection limit adopted for screening purposes.

7. SITE INVESTIGATION DESIGN AND METHODOLOGY

7.1. Investigation Design

The objectives of the investigation were to:

- Discuss the site condition;
- Design a soil investigation program in accordance with the New South Wales Environmental Protection Authority (NSW EPA) *Sampling Design Guidelines* (1995);
- Assess and describe the source, type, extent and level of contamination (if present) within surface soils/fill materials throughout the site i.e. from soil surface to a depth of natural virgin materials; and
- Determine the human health and environmental risk (if present) from fill materials.

7.2. Pre–work Procedure

Before work commenced a site specific SH&EWMS was developed for the project, which was presented in a pre-start toolbox talk prior to the commencement of works and was signed onto by ADE staff and contractors.

7.3. Soil Drilling Works

Based on the criteria for the import of material into GHCP (refer to **Table 1**), ADE determined the likelihood of contamination within the fill material was low. ADE adopted a sampling density for a site of approximately 41,480, as recommended in the NSW Sampling Design Guidelines 1995, with 50 proposed borehole locations throughout the site.

Due to the location and size of the two topsoil stockpiles within the site, two sample locations were not able to be completed. Due to the low likelihood of contamination within the site as well as the very shallow fill (<0.3 m BGL) in the location of the two stockpiles, the omission of the two sample locations is not considered significant and is not considered to have affected the overall outcome of the investigation.

Drilling was undertaken by an experienced licensed drilling company Environmental and Geotechnical Drilling Services using a Commachio Geo205 on the 31st of March and 1st of April 2016, under the supervision of a suitably experienced ADE environmental consultant. A summary of the drilling works is presented in Table 8 below.

Table 8. Soil Drilling Works Summary

Date	Sampling Point	Method	Depth Drilled (m BGL)
31.03.2016	BH01	Solid Flight Auger	2.5
	BH02	Solid Flight Auger	2.5
	BH03	Solid Flight Auger	2.6
	BH04	Solid Flight Auger	3.1
	BH05	Solid Flight Auger	3.1
	BH06	Solid Flight Auger	3.1
	BH07	Solid Flight Auger	2.7
	BH08	Solid Flight Auger	2.5
	BH09	Solid Flight Auger	2.0
	BH10	Solid Flight Auger	2.4
	BH11	Solid Flight Auger	1.6
	BH12	Solid Flight Auger	3.4
	BH13	Solid Flight Auger	3.0
	BH14	Solid Flight Auger	2.0
	BH15	Solid Flight Auger	1.6
	BH16	Solid Flight Auger	1.6
	BH17	Solid Flight Auger	1.2
	BH18	Solid Flight Auger	1.2
	BH19	Solid Flight Auger	1.2
	BH20	Solid Flight Auger	1.5
	BH21	Solid Flight Auger	1.5
	BH22	Solid Flight Auger	2.0
	BH23	Solid Flight Auger	2.1
	BH24	Solid Flight Auger	2.0
	BH25	Solid Flight Auger	1.6
	BH26	Solid Flight Auger	1.7
	BH27	Solid Flight Auger	1.2
	BH28	Solid Flight Auger	1.4
01.04.2016	BH29	Solid Flight Auger	1.2
	BH30	Solid Flight Auger	1.0
	BH31	Solid Flight Auger	1.2
	BH32	Solid Flight Auger	0.5
	BH33	Solid Flight Auger	0.5
	BH34	Solid Flight Auger	1.5
	BH35	Solid Flight Auger	2.0
	BH36	Solid Flight Auger	2.0
	BH37	Solid Flight Auger	1.0
	BH38	Solid Flight Auger	0.6
	BH39	Solid Flight Auger	0.5
	BH40	Solid Flight Auger	0.5
	BH41	Solid Flight Auger	0.5
	BH42	Solid Flight Auger	0.5
	BH43	Solid Flight Auger	0.5
	BH44	Solid Flight Auger	0.5

Table 8 – Continued...

Date	Sampling Point	Method	Depth Drilled (m BGL)
01.04.2016	BH45	Solid Flight Auger	0.5
	BH46	Solid Flight Auger	0.5
	BH47	Solid Flight Auger	0.7
	BH48	Solid Flight Auger	1.4

Observations of soil encountered during the Site investigation at each of the sample locations from BH01 – BH48 were logged as per industry standard (refer to Appendix IV – Borehole Logs and Appendix III – Sample Map).

7.4. Soil Sampling

A total number of 80 discrete primary soil samples collected from 48 boreholes located in a grid based pattern throughout the site were submitted to the laboratory for chemical analysis (excluding QA/QC samples). Samples were collected at the surface of each borehole, and every 1.0 m thereafter to the depth of Virgin Excavated Natural Material. A selection of samples were submitted based on the type of material present, and the depth to VENM. The full analytical program for each sample can be seen in Section 8 of this report.

Field activities were supervised by an experienced environmental consultant who directed sampling operations.

7.5. Decontamination

ADE's standard decontamination procedures were undertaken prior to drilling at each sample location. The solid flight auger drilling equipment was cleaned between sampling points, to minimise the possibility of cross-contamination.

For each sample, dedicated disposable materials (e.g. nitrile gloves) were changed between each sample. As such, additional decontamination procedures were not deemed necessary. All disposable sampling equipment and rubbish was collected and removed prior to leaving Site.

7.6. Documentation

A field observation log was kept by sampling personnel. Details recorded in the log included:

- Borehole and sample number;
- Soil profile notes;
- Sampling method;
- Sample identification;
- Sample description; and
- Sample point measurements.

A comprehensive master sample register was maintained. As samples were received, they were given a unique sequential number from the sample register into which details from the labels were entered.

Before packing and dispatch of samples for analysis, a Chain of Custody form was completed. This form recorded details of the individual samples being dispatched and the type of analysis required for each sample.

7.7. Sample Management

Samples were collected using fresh gloves and placed in sterile glass jars with Teflon lined lids and small zip lock bags before being placed into a pre-cooled Esky.

A photoionisation detector (PID) with a 10.6 eV lamp, pre-calibrated with isobutylene gas at 100 ppm was used to screen the headspace gases of the collected samples to assess for the presence of VOCs. PID headspace screening was conducted using a resealable zip lock plastic bag, the soil sample was agitated as the PID reading was taken inside the zip lock plastic bag (the bag was appropriately sealed when inserting the PID meter).

Replicate soil samples (Blinds and Splits) were collected by thoroughly mixing a sample in a large zip lock bag, the samples were divided into and placed in sterile glass jars with Teflon lined lids and small zip lock bags. The jars were filled to capacity to ensure minimal headspace was present prior to tightly securing the lid and then placed into a pre-cooled Esky.

Each sample jar was well protected by packaging material. Ice packs were inserted in the Esky to maintain the samples at approximately 4^0C. The original Chain of Custody form was enclosed in the Esky that was then sealed and dispatched to NATA accredited analytical laboratories.

Using the methods as outlined below, stratigraphical information was obtained along with the samples in order to assess the shallow geological conditions at the site in accordance with *AS 1726-1993 'Australian Standard Geotechnical Site Investigations'* (refer to Appendix IV – Borehole Logs and Soil Stratigraphy).

The methodology for collection of samples included the following:

Borehole Procedure

Boreholes were conducted using a Commachio Geo205 to advance a 100 mm solid flight auger. Samples were generally collected at 0.1-0.2 m, and at 1.0 m intervals and/or where variations in geological conditions were present and / or apparent contamination was present to a maximum depth of virgin excavated natural material. A select number of samples were then chosen for laboratory analysis.

7.7.1. Laboratory Analysis

All copies of the completed Chain of Custody forms were retained on the Central Filing System and the originals were sent to the analytical laboratories together with the samples. The following outlines the NATA accredited laboratories used for analytical testing:

- Primary samples collected by ADE on the 31st of March and 1st of April 2016 for chemical characterisation were submitted to ADE's own Environmental and OH&S Laboratory;

- Primary samples collected by ADE on the 31st of March and 1st of April for analysis of Cation Exchange Capacity (CEC) were submitted to MGT; and

- Secondary QAQC samples collected by ADE on the 31st of March and 1st of April to assess QA/QC adherence were sent to MGT and ADE's own Environmental and OH&S Laboratory.

8. SAMPLING AND ANALYTICAL PROGRAM

The following table outlines the Sampling and Analytical program, and rationale for analysis of soil samples collected within the Site throughout the investigation:

The selected samples were tested for a range of analytes including:

- Heavy Metals – As, Cd, Cr, Cu, Pb, Hg, Ni and Zn;
- TRH;
- BTEX;
- PAHs;
- OCPs;
- OPPs;
- PCBs;
- pH; and
- CEC.

The sampling and analytical program is outlined below in **Table 9.**

Refer to Appendix VIII – Analytical Reports for the analytical methods used by Eurofins I MGT and ADE's Environmental OH&S Laboratory.

Table 9. Sampling and Analytical Program for Site Investigation.

Date	Location *(refer to Appendix III for sample locations)*	Sample ID	Depth (m BGL)	Sample Type	Analysis
31.03.2016	BH1	10354-BH01.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH01.E	2.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH2	10354-BH02.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH02.E	2.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH3	10354-BH03.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH03.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH4	10354-BH04.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH04.E	2.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH5	10354-BH05.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH05.E	2.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH6	10354-BH06.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH06.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID

Table 9. Continued...

Date	Location *(refer to Appendix III for sample locations)*	Sample ID	Depth (m BGL)	Sample Type	Analysis
31.03.2016	BH7	10354-BH07.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH07.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH8	10354-BH08.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH08.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH9	10354-BH09.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH09.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH10	10354-BH10.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH10.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH11	10354-BH11.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH11.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH12	10354-BH12.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH12.E	2.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH13	10354-BH13.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH13.E	2.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH14	10354-BH14.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH14.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH15	10354-BH15.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH15.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH16	10354-BH16.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH16.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH17	10354-BH17.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH18	10354-BH18.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH19	10354-BH19.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH19.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID

Table 9. Continued..

Date	Location *(refer to Appendix III for sample locations)*	Sample ID	Depth (m BGL)	Sample Type	Analysis
31.03.2016	BH20	10354-BH20.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH20.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH21	10354-BH21.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH21.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH22	10354-BH22.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH22.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH23	10354-BH23.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH23.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH24	10354-BH24.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH24.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH25	10354-BH25.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH25.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs, PID, pH & CEC
01.04.2016	BH26	10354-BH26.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH26.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH27	10354-BH27.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH27.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH28	10354-BH28.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH28.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH29	10354-BH29.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH30	10354-BH30.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH31	10354-BH31.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH31.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH32	10354-BH32.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH33	10354-BH33.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID

Table 9. Continued...

Date	Location *(refer to Appendix III for sample locations)*	Sample ID	Depth (m BGL)	Sample Type	Analysis
01.04.2016	BH34	10354-BH34.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH34.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs, PID, pH & CEC
	BH35	10354-BH35.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH35.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH36	10354-BH36.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH36.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH37	10354-BH37.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH38	10354-BH38.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH38.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH39	10354-BH39.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH40	10354-BH40.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH41	10354-BH41.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH42	10354-BH42.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs, PID, pH & CEC
	BH43	10354-BH43.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH44	10354-BH44.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH45	10354-BH45.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH46	10354-BH46.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH47	10354-BH47.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
	BH48	10354-BH48.A	0.1	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
		10354-BH48.C	1.0	Soil	PAH, OCPs, OPPs, TRH, BTEX, Metals, PCBs & PID
31.03.2016	-	10354-TripSpike1	-	Water	BTEX
	-	10354-TripBlank1	-	Water	BTEX
01.04.2016	-	10354-TripSpike2	-	Water	BTEX
	-	10354-TripBlank2	-	Water	BTEX

9. RESULTS AND DISCUSSION

9.1. Field Observations

A summary of Site observations are presented below:

- Site was completely vacant, with no vegetation or grass cover present;
- Two large stockpiles of topsoil were present in the northern sector of the site. ADE was advised by the client that these soils originated from within the site and would be placed in other areas of the GHCP, therefore these stockpiles were not included in the scope of the investigation;
- Fill materials were observed as a majority of silty clay, with gravelly silty clay, with underlying VENM materials consisting of orange/brown silty clay (medium plasticity);
- VENM was identified below the fill materials in all boreholes, noted as being shallow (<0.5 m BGL) in the north-eastern portion of the site to a maximum depth of approximately 3.0 m BGL in the southern portion of the site;
- Asbestos containing material (ACM) was not observed on the soil surface throughout the site or within any of the boreholes;
- Throughout the site the maximum PID reading was 8.8 ppm. All other samples recorded PID readings of less than 1.0 ppm;
- No hydrocarbon or malodorous odours were noted within any of the boreholes;
- No foreign materials were observed in any of the boreholes; and
- No sulfidic ores or any other indication of acid sulfate soils was observed within any of the boreholes.

9.2. Site Contamination – Health Investigation Levels (HIL B)

Laboratory analysis of 80 primary soil samples collected from 48 boreholes from 0.0 – 3.0 m BGL across the site indicate that the concentrations of the contaminants of potential concern were less than the adopted human health assessment criteria for Tier 1 screening purposes for residential (HIL A/HSL A), as outlined in NEPM 2013, with the exception of one sample shown in **Table 10**, below. The details of the analysis results are presented in Appendix II – Results Tables.

Table 10. Health Investigation Level exceedances

Sample/Depth	Analyte	Description	SAC (mg/kg)	Concentration (mg/kg)
10354-BH03.C / 1.0 m BGL	Benzo(a)pyrene TEQ	Fill	3.0	3.5

Statistical analysis of all data revealed that the data did not follow a normal or lognormal distribution, therefore not allowing the calculation of a 95% UCL. However considering the average concentration for BaP TEQ across all fill samples is 0.7 mg/kg, with a standard deviation of 0.3 (less than half of the SAC), the minor exceedance, being less than 2.5 times the SAC is not considered to be of risk to human health.

9.3. Site Contamination – Health Screening Levels

Laboratory analysis of 80 primary soil samples collected from 48 boreholes from 0.0 – 3.0 m BGL across the site indicate that the concentrations of the contaminants of potential concern were less than the adopted

HSLs for Vapour Intrusion, Screening Levels for Vapour Risk to Intrusive Maintenance Workers (Shallow Trench 0.0 to <2.0 m), and HSL levels for direct human contact. The details of the analysis results are presented in Appendix II – Results Tables.

9.4. Site Contamination – 'Petroleum hydrocarbon management limits' ('management limits')

Laboratory analyses of 80 primary soil samples collected from 48 boreholes from 0.0 – 3.0 m BGL across the site indicate that the concentrations of the contaminants of potential concern were less than the adopted site assessment criteria for petroleum hydrocarbon management limits. The details of the analysis results are presented in Appendix II – Results Tables.

9.5. Asbestos

No asbestos containing materials were observed throughout the surface of the site or within any of the boreholes during the field works.

9.6. Ecological Investigation Levels (EILs) Residential

Laboratory analysis of 80 primary soil samples collected from 48 boreholes from 0.0 – 3.0 m BGL across the site indicate that the concentrations of the contaminants of potential concern were less than the adopted EILs. The details of the analysis results are presented in Appendix II – Results Tables.

9.7. Ecological Screening Levels (ESLs)

Laboratory analysis of 80 primary soil samples collected from 48 boreholes from 0.0 – 3.0 m BGL across the site indicate that the concentrations of the contaminants of potential concern were less than the adopted ESLs, with the exception of the following sample:

Table 11. Ecological Screening Level exceedances.

Sample/Depth	Analyte	Description	SAC (mg/kg)	Concentration (mg/kg)
10354-BH03.C / 1.0 m BGL	Benzo(a)pyrene	Fill	0.7	2.4

The NEPM ESL of 0.7 mg/kg for benzo (a) pyrene is based on a single invertebrate species taken from the Canadian Soil Quality Guideline, 1999 and is considered conservative and should be treated as a low reliability trigger value.

The Candadian Soil Quality Guidelines has since been updated in 2010 and now considered a concentration of 20 mg/kg for the protection of non-human environmental for agricultural and residential/parkland sites.

The single BaP exceedance outlined in the table above originated from the southern section of the site, proposed to become an at-grade car park, with no landscaping proposed in this area of the site. Further, the average concentration for BaP of the soil samples taken throughout the site is 0.3 mg/kg, below the NEPM 2013 ESLs. Taking the above into account ADE does not consider the exceedance outlined in Table 11 to be of risk to ecological receptors.

9.8. Aesthetics

Field observations made during soil sampling indicate that aesthetic circumstances likely to trigger further assessment were not encountered.

10. DATA QUALITY ASSESSMENT

In order to carry out the assessment of the data acquired in the course of the investigation, the US EPA Guidelines including, but not limited to the 'Guidance on Assessing Quality Systems' (2003) and 'Guidance on Systematic Planning using the Data Quality Objectives Process ' (2006) (refer to Section 14 - References) were used.

The Guidelines provide general strategy on assessing data quality criteria and performance specifications for decision making. The following is the output from most of the steps of the Data Quality Assessment (DQA) Process provided in the Guidelines. The sub-steps recommended are given in *italic.*

10.1. Data Review

Quality control reports from the laboratories subcontracted for sample analyses were reviewed. The data included laboratory blank samples, duplicate samples, control samples, spiked samples and method blanks.

The review of the QA/QC program was conducted in accordance with the items recommended by the NSW EPA to be included in the consultants' reports. Some additional recommendations from the US EPA methodology referred to by AS 4482.1 were also followed.

10.2. COC

Australian Standard AS 4482.1 defines the Chain-Of-Custody (COC) documentation as the link in the transfer of samples between the time of collection and arrival at the laboratory.

The COC utilised by ADE included the items recommended by the Standard:

a) name of person transferred the samples
b) name of person who received the samples
c) date the samples were collected
d) date the samples were received at the laboratory
e) name and contact details of client

The Sample Receipt Advice documentation was also supplied by Eurofins I MGT where time of samples received was specified.

10.3. Record of Holding Times

The objective was to ascertain the validity of the analysis results based on the holding time of the samples from the time of collection to the time of analysis. The technical holding time criteria for soil samples are summarised in **Table 12.**

Table 12 - Recommended preservation and holding time for soil and water samples.

Analyte	Recommended Preservation	Recommended Holding Time	Time taken to from field works to laboratory submission
Metals (excluding Hg & Cr VI)	No preserve required	6 months	< 5 days
Mercury or Chromium VI	4^0C	28 days	< 5 days
SVOCs (including OCP/OPPs, PAHs, PCBs)	4^0C	14 days	< 5 days
TPH (C6-C9) plus BTEX	4^0C, zero headspace	14 days	< 5 days
TPH/TRH (C10-C40)	4^0C	14 days	< 5 days
Polychlorinated Biphenyls	6^0C	28 days	< 5 days

Holding times from collection of the soil samples to submission to ADEs in-house Environmental and OH&S Laboratories (EOHS) and Eurofins MGT, meet the recommended criteria, with all soil samples submitted to the laboratory within two days and analysed within seven days from the time of collection (refer to Appendix VII – Analytical Reports).

10.4. Analytical Methods Used

Refer to Appendix VII – Analytical Reports for the specification of analytical methods used by the laboratories.

10.5. Laboratory Accreditation For Analytical Methods Used

Refer to Appendix VII – Analytical Reports for the details of laboratory accreditations for analytical methods used.

10.6. Detection Limits/Practical Quantification Limits

The smallest amount of a substance that can be detected by EOH&S Laboratory above the noise in a procedure and within a stated confidence level is the detection limit. Current practice identifies several detection limits. These are the instrument detection limit (IDL), the lower level detection (LLD), the method detection limit (MDL) and the practical quantitation limit (PQL).

The relationship among these levels is approximately IDL : LLD : MDL : PQL = 1 : 2 : 4 : 10. Refer to Appendix VII – Analytical Reports for the list of PQLs provided by EOH&S Laboratory. When dilution of a sample is involved in the sample preparation, the method detection limit is adjusted by the dilution factor.

10.7. Field QA/QC

A summary of the QA/QC samples collected during field works is provided in **Table 13** below.

Table 13 – Summary of field QA/QC samples collected

Field QA/QC	Frequency	Sample details
Blind replicate samples	1 per 20	Soil Samples: • 10354-BR1 is a blind replicate of sample 10354-BH08.C, collected on the 31.03.2016 • 10354-BR2 is a blind replicate of sample 10354-BH25.C, collected on the 31.03.2016 • 10354-BR3 is a blind replicate of sample 10354-BH34.C, collected on the 01.04.2016 • 10354-BR4 is a blind replicate of sample 10354-BH42.A, collected on the 01.04.2016
Split (triplicate) samples	1 per 20	Soil Samples: • 10354-SP1 is a split replicate of sample 10354-BH08.C, collected on the 31.03.2016 • 10354-SP2 is a split replicate of sample 10354-BH25.C, collected on the 31.03.2016 • 10354-SP3 is a split replicate of sample 10354-BH34.C, collected on the 01.04.2016 • 10354-SP4 is a split replicate of sample 10354-BH42.A, collected on the 01.04.2016
Trip blank	1 per sampling event	• 10354-TripBlank-1, is a trip blank sample used during the sampling event on the 31.03.2016 • 10354-TripBlank-2, is a trip blank sample used during the sampling event on the 01.04.2016
Trip spike	1 per sampling event	• 10354-TripSpike-1, is a spiked VOC sample used during the sampling event on the 31.03.2016 • 10354-TripSpike-2, is a spiked VOC sample used during the sampling event on the 01.04.2016

10.8. Summary of Data Quality Indicators

A summary of QA/QC results compared to the DQI's is provided in **Table 14** below. Tables with results of QA/QC samples and relative percentage differences (RPD) are presented in Appendix II – Results Tables.

Table 14 – Summary of DQI's

Precision
Precision is a measure of agreement among replicate measurements of the same property, made under prescribed similar conditions. Blind Replicate Samples: • Four blind replicate samples were collected to determine the variability of the sampling process. Samples were collected simultaneously from the same source and under identical conditions as the original sample. • Australian Standard 4482.1 specifies the typical RPD values for blind replicate samples to be 30% - 50%. Combining the AS acceptance criteria with the recommendations of the USEPA methodology, the control limits described below were used. • Considering the heterogeneous nature of the material within the site the following criteria was considered appropriate: 1. A control limit of 50% for the RPD for original and blind replicate sample values greater than or equal to 5x the Detection Limit (DL), 2. A control limit of ± the DL if either the sample or duplicate value is less than 5x the DL. 3. If both samples values are less than the DL, the RPD is not calculated. • Appendix II – Results Tables provides the Relative Percent Difference (RPD) values for the original and blind replicate samples collected during the soil investigations. Where condition 2 or 3 was applicable, an estimated level of agreement between the results was provided and, where appropriate, an RPD value calculated. • **QA/QC Table 1 in Appendix II** show the blind replicate samples in comparison to primary samples. • Blind Replicate (BR) sample showed 68 valid values and 8 invalid values. Laboratory Split Samples: • Split samples were analysed to measure the variability between laboratories. • Four split samples were submitted for analysis at Eurofins, MGT. These were compared to the original samples analysed by Environmental and OH&S Laboratory. • **QA/QC Table 2 in Appendix II** shows the split samples in comparison to primary samples. • The assessment variability of the split samples showed 62 valid values and 10 invalid value. Overall, precision has been deemed acceptable.

Table 14– Continued…

Accuracy
Accuracy is a measure of the closeness of an individual measurement to the true value. Accuracy is determined by analysing a reference material of known pollutant concentration or by re-analysing a sample to which a material of known concentration or amount of pollutant has been added. Accuracy was also evaluated by reviewing the values of percentage recoveries reported in spike samples. Trip Blank Results: • Two trip blank sample was prepared prior to the soil sampling event on the 31.03.2016 and the 01.04.2016 and was stored with the investigative samples throughout the sampling event. The trip bank sample was then packaged for shipment with the other representative samples and submitted for analysis. Trip blanks are used to determine if samples were contaminated during storage and/or transportation back to the laboratory (a measure of sample handling variability resulting in positive bias in contaminant concentration) • Trip blank samples and results are presented in **QA/QC Table 3 of Appendix II.** • The trip blank sample analysed returned results below the detection limit, resulting in 10 valid values and 0 invalid values. Trip Spike Results: • Two spiked BTEX sample was analysed in order to estimate the loss of volatile compounds during the storage, handling and transportation of samples collected in the field during the sampling event on the 31.03.2016 and the 01.04.2016. • The samples were prepared by Environmental and OH&S Laboratory prior to the field work and spiked with 40 µg/L of BTEX. The samples were stored, handled, and transported in exactly the same way as the field samples. The percent recoveries for BTEX from both sampling events are provided in Appendix II. • Trip spike samples and results are presented in **QA/QC Table 4 of Appendix II.** • The trip spike sample analysed returned results within the adopted criteria (60-140% of the original concentration), resulting in 10 valid values and 0 invalid values. Spike and Surrogates: • According to the US EPA methodology, it is recommended to consider the following actions based on the spike recovery results for inorganic analytes: • If the spike recovery is >125% and the reported sample results are less than the Practical Quantitation Limit (< PQL), the data is acceptable for use, • If the spike recovery is >125% or <75% and the sample results are > PQL, qualify the data for these samples as “estimated”, • If the spike recovery falls within the range of 30-74% and the sample results are < PQL, qualify the data for these samples as “estimated and may be inaccurate or imprecise”, • If spike recovery results fall <30% and the sample results are < PQL, qualify the data for these samples as “unusable”. • Environmental and OH&S Laboratory limit of 70-130% for inorganics / metals, and 60-140% for organics was used in order to validate matrix spikes and laboratory control samples. The laboratory limit of 50-150% was implemented in order to validate surrogate recoveries for organic analytes. These criteria, generally, conform to the USEPA recommended standards. • **Analysis of spikes and surrogates showed 872 valid values and 0 invalid values.**

Table 14– Continued…

Accuracy
Laboratory Duplicates: • Duplicate sample determinations were provided by the laboratories to demonstrate acceptable method precision at the time of analysis. Duplicates are, generally, analysed at a frequency of 1 for every 10 samples. AS 4482.1 provides an acceptable range of the Relative Percent Difference (RPD) values up to 50% for quality control samples. • **Analysis of laboratory duplicates showed 709 valid values and 2 invalid values of RPD.** Laboratory Blanks: • The assessment of blank analysis results was to determine the existence and magnitude of contamination resulting from laboratory activities. • The assessment of blank analysis results was carried out in order to determine the existence and magnitude of contamination resulting from laboratory activities. No contaminants were found in the blanks analysed by the laboratory. • **Analysis of laboratory blanks showed 400 valid values and 0 invalid values.**
Representativeness
Representativeness is a measure of the degree to which data accurately and precisely represent a characteristic of a population parameter at a sampling point or for a process condition or environmental condition. It was verified that each point in space had an equal probability of being selected for sampling. The site investigation revealed that soil samples collected were representative of the stratiographic formations from which they were collected. It appears that measurements of the population of interest were made in such a manner that the resulting data appropriately reflect the environment investigated.
Comparability
Comparability is the qualitative term that expresses the ability to fairly compare sample test results taken from the same site at different times. ADE's field personnel assigned for the project had considerable experience in the environmental investigations of contaminated sites. Training records of the personnel are kept in the Quality Assurance Manual ADE-QAM-III. Sampling and measurements in the field were performed by the same personnel during the field stage of the investigation. Standard ADE's environmental investigation procedures were used by the personnel in the field.

Table 14– Continued…

Comparability
No deviations from the sampling procedures were observed by the site supervisor during the fieldwork. Therefore, none or negligent bias in the data collection was expected. The spatial and temporal changes on the site during this period did not have significant influence in order to bias the data due to the environmental dynamics. Units in which the data was measured in the field and the laboratory analysis had the same metrics.
Completeness
Document Completeness In the author's opinion, the documentation used in the course of the investigation were completed to satisfactory standards, including: • Field observation logs, • Chain of Custodies, • Orders, • Laboratory accreditation, and • Laboratory reports. Data Completeness Please see **Table 15,** providing a summary of the data validity.

10.9. QA/QC Data Evaluation

The principles DQIs are precision, accuracy, representativeness, comparability, and completeness referred to by the acronym PARCC. Precision and accuracy are the quantitative measures, representativeness and comparability are qualitative, and completeness is a combination of both quantitative and qualitative measures. In the following, **Table 15** summarises the DQO reconciliation.

Table 15 - Summary of DQO reconciliation.

QA/QC Item	DQO Criteria	Valid Values	Not Valid Values	Completeness	Conclusion
Laboratory duplicate samples	95%	709	2	99.72%	Acceptable
Laboratory blank samples	100%	400	0	100.00%	Acceptable
Laboratory spike/surrogate recoveries	95%	872	0	100.00%	Acceptable
Laboratory control (split) sample	75%	62	10	86.11%	Acceptable
Blind replicate samples	75%	68	8	89.47%	Acceptable
Trip blank sample	95%	10	0	100.00%	Acceptable
Spike BTEX	75%	10	0	100.00%	Acceptable
Overall Completeness:	**95%**	2131	20	99.07%	**Acceptable**

The ratio of the valid data to the total number of the analyses conducted in the QA/QC program yielded 99.07%. As such, the data collected in the course of the investigation meets the target result for the completeness of the QA/QC program stated in the DQOs (95%).

11. CONCLUSIONS

Based on a review of the available desktop search data, Site observations during the DSI, results of analytical reports and the proposed future land use as a hospital, ADE concludes that:

- The potential for significant and/or widespread chemical contamination arising from historical land use activities on Site is considered to be low;
- The concentrations of chemical contamination detected within fill materials (0.0 – 3.0 m BGL) of the site meet the adopted site assessment criteria and do not pose an unacceptable risk to human health or ecological receptors;
- No asbestos containing materials were observed within the soil materials (0.0 – 3.0 m BGL) within any of the boreholes during the field works.

11.1. Contamination Status of the Site

Based on the findings of the DSI, the concentrations of the potential contaminants within the soil samples collected were below the assessment criteria. It is the opinion of ADE that no significant contamination is present within the site, and the site is suitable for its proposed land use as a hospital.

12. LIMITATIONS

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based on information provided by the client. The advice herein relates only to this project and all results, and conclusions made should be reviewed by a competent and experienced person with experience in environmental investigations, before being used for any other purpose. A.D. Envirotech Australia Pty Ltd (ADE) accepts no liability for use or interpretation by any person or body outside the consent authority. This report should not be reproduced or amended in any away without prior approval by the client or ADE and should not be relied upon by any other party, who should make their own independent enquiries.

The extent of sampling of soils and subsequent analysis has been necessarily limited and has been targeted towards areas where contamination is considered to be most likely based on the knowledge of the site history and visual observation. This approach maximises the probability of identifying contaminants, however, it may not identify contamination which occurs in unexpected locations or from unexpected sources.

Further, soils rock and aquifer conditions are often variable, resulting in non-homogenous contaminant distributions across a site. Contaminant concentrations have been identified at chosen sample locations, however, conditions between samples locations can only be inferred on the basis of the estimated geological and hydrogeological conditions and the nature and extent of indentified contamination. Boundaries between zones of variable contamination are often indistinct and have been interpreted based on available information and the application of professional judgement. The accuracy with which the subsurface conditions have been characterised depends on the frequency and methods of sampling and the uniformity of subsurface conditions and is therefore limited by the scope of works undertaken.

This report does not provide a complete assessment of the environmental status of the site and it is limited to the scope defined herein.

Should information become available regarding conditions at the site including previously unknown sources of contamination, ADE reserves the right to review the report in the context of the additional information.

ADE accepts no liability for the unlawful disposal of waste materials from any site. ADE does not accept any responsibility for the material tracking, loading, management, transport or disposal of waste from the site.

ADE's professional opinions are based upon its professional judgement, experience, training and results from analytical data. In some cases further testing and analysis may be required, thus producing different results and/or opinions. ADE has limited investigation to the scope agreed upon with its client.

ADE has used a degree of care and skill ordinarily exercised in similar investigations by reputable member of the Environmental Industry within Australia. No other warranty, expressed or implied, is made or intended.

13. REFERENCES

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2. Assessment of Site Contamination, National Environmental Protection Measure (NEPM) 1999.
3. Australian Standard AS 4482.1 Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds
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6. Guidelines for Consultants Reporting on Contaminated Sites, NSW EPA, September 2000
7. Guidance for the Data Quality Objectives Process (EPA QA/G-4)
8. Guidance for Data Quality Assessment: Practical Methods for Data Analysis (EPA QA/G-9)
9. Data Quality Assessment Statistical Toolbox (DataQUEST) (EPA QA/G-9D)
10. Decision Error Feasibility Trials (DEFT) Software for the Data Quality Objectives Process (EPA QA/G-4D)
11. Department of Natural Resources, Groundwater Bore Search, NRAtlas website, November 2010
12. EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5)
13. Friebel & Nadebaum (2011) *Health Screening levels for petroleum hydrocarbons in soil and groundwater, Part 2: Application Document, Technical report No. 10.*
14. Guidance for the Preparation of Standard Operating Procedures for Quality-Related Documents (EPA QA/G-6)
15. Guidance on Data Quality Indicators, EPA QA/G-5I
16. Guidelines for the NSW EPA Site Auditor Scheme" (2nd Edition), (NSW EPA, April 2006) and AS 4482.1 (2005).
17. The Enhealth Guidelines for Asbestos in the Non-Occupational Environment (2005),
18. NSW EPA Sampling Design Guidelines (1995).
19. NEPM (2013) "Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater";

APPENDIX I – PHOTOGRAPHS

Photograph 1. Site as observed on the 31.03.2016 (facing south).

Photograph 2. Site as observed on the 31.03.2016 (facing west).

APPENDIX II – RESULTS TABLE

STC-09-10099 - Results from soil data collected by ADE at Lot 832 & 833, Gregory Hills Drive, Gledswood Hills NSW

							TRH (without silica gel clean-up)				BTEX				Metals								PAHs																			
							C6-C10 (F1)	C10-C16 (F2)	C16-C34 (F3)	C34-C40 (F4)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Arsenic	Cadmium	Chromium (IV)	Copper	Lead	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Carcinogenic PAHs (BaP TEQ) [2]	Total PAHs
Residential Land-use (HIL-A) (mg/kg)[1a]							-	-	-	-	-	-	-	-	100	20	100	6,000	300	40	400	7,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	300
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg)[1b,3]							50	280	-	-	0.7	480	-	110	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg)[1b,3]							90	-	-	-	1	-	-	310	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg)[1b,3]							150	-	-	-	2	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 4m+ (HSL-A) (mg/kg)[1b,3]							290	-	-	-	3	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential, parkland and public open space (mg/kg)[4, 5]							800	1,000	3,500	10,000	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact (HSL-A) (mg/kg)[1b]							5,600	4,200	5,800	8,100	140	21,000	5,900	17,000	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,200	-	-	-	-
Intrusive Maintenance Worker - Shallow Trench (mg/kg)[3]							82,000	62,000	85,000	120,000	77	120,000	85,000	130,000	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,000	-	-	-	-
Sample I.D.	Laboratory	Consultant	Date	Depth (m BGL)	PID	Soil type																																			
10354-BH01.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	19	<0.3	19	34	28	<0.2	21	66	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH01.E	EOHS	ADE	31.03.2016	2.0	0.6	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	18	<0.3	16	33	29	<0.2	16	58	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH02.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	21	<0.3	14	45	45	<0.2	29	91	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.7	<4.8
10354-BH02.E	EOHS	ADE	31.03.2016	2.0	8.8	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	15	<0.3	14	22	19	<0.2	14	41	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH03.A	EOHS	ADE	31.03.2016	0.1	0.8	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	18	<0.3	15	22	20	<0.2	<10	30	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH03.C	EOHS	ADE	31.03.2016	1.0	0.9	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	17	<0.3	20	25	32	<0.2	<10	50	<0.3	<0.3	**0.4**	**2.0**	**2.4**	**2.8**	**1.7**	**1.0**	**2.0**	<0.3	**4.8**	<0.3	**1.4**	<0.3	**0.4**	**4.8**	**3.5**	**25.4**
10354-BH04.A	EOHS	ADE	31.03.2016	0.1	1.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	12	<0.3	9	6	22	<0.2	<10	30	<0.3	<0.3	<0.3	**0.3**	**0.4**	**0.4**	<0.3	<0.3	**0.4**	<0.3	**0.8**	<0.3	<0.3	<0.3	<0.3	**0.8**	**0.8**	**6.0**
10354-BH04.E	EOHS	ADE	31.03.2016	2.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	16	<0.3	12	25	24	<0.2	12	50	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.5**	<0.3	<0.3	<0.3	<0.3	**0.5**	**0.7**	**5.2**
10354-BH05.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	18	<0.3	7	29	19	<0.2	<10	30	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH05.E	EOHS	ADE	31.03.2016	2.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	15	<0.3	24	46	32	<0.2	36	66	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH06.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	20	<0.3	11	34	24	<0.2	<10	51	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH06.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	35	<0.3	12	72	42	<0.2	<10	52	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH07.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	18	<0.3	13	53	41	<0.2	48	110	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH07.C	EOHS	ADE	31.03.2016	1.0	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	15	<0.3	8	45	31	<0.2	27	81	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH08.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	17	<0.3	9	31	29	<0.2	13	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH08.C	EOHS	ADE	31.03.2016	1.0	0.3	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	16	<0.3	13	22	17	<0.2	12	47	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH09.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	17	<0.3	14	32	25	<0.2	14	56	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH09.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	17	<0.3	30	18	20	<0.2	11	39	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH10.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	<5	6	15	<0.2	<10	36	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.5**	<0.3	<0.3	<0.3	<0.3	**0.5**	**0.7**	**5.1**
10354-BH10.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	6	<0.3	12	24	12	<0.2	<10	34	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH11.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	10	<0.3	16	33	29	<0.2	20	61	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH11.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	7	<0.3	14	25	11	<0.2	<10	34	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH12.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	9	<0.3	13	36	23	<0.2	22	72	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH12.E	EOHS	ADE	31.03.2016	2.0	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	15	<0.3	21	110	55	<0.2	35	75	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.4**	<0.3	<0.3	<0.3	<0.3	**0.4**	**0.7**	**5.1**
10354-BH13.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	13	<0.3	18	25	26	<0.2	13	43	<0.3	<0.3	<0.3	**0.4**	**0.3**	**0.5**	<0.3	<0.3	**0.4**	<0.3	**1.2**	<0.3	<0.3	<0.3	<0.3	**1.2**	**0.8**	**7.0**
10354-BH13.E	EOHS	ADE	31.03.2016	2.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	17	<0.3	23	62	52	<0.2	27	79	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.7	<4.8
10354-BH14.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	11	<0.3	21	36	30	<0.2	17	64	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH14.C	EOHS	ADE	31.03.2016	1.0	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	13	<0.3	17	32	23	<0.2	23	79	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH15.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	8	<0.3	18	32	<10	<0.2	11	53	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH15.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	13	<0.3	21	39	37	<0.2	15	69	<0.3	<0.3	<0.3	<0.3	**0.4**	**0.5**	**0.3**	<0.3	<0.3	<0.3	**0.4**	<0.3	<0.3	<0.3	**0.4**	**0.9**	**5.2**
10354-BH16.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	12	<0.3	25	58	200	0.5	14	88	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.3**	<0.3	<0.3	<0.3	<0.3	**0.3**	**0.7**	**4.8**
10354-BH16.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	13	<0.3	23	26	15	<0.2	17	50	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH17.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	11	<0.3	23	16	22	<0.2	<10	27	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH18.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	13	<0.3	13	10	<10	<0.2	<10	10	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH19.A	EOHS	ADE	31.03.2016	0.1	0.3	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	16	<0.3	11	17	<10	<0.2	<10	24	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH19.C	EOHS	ADE	31.03.2016	1.0	0.2	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	13	<0.3	18	34	<10	<0.2	17	77	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH20.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	11	<0.3	18	16	18	<0.2	<10	32	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH20.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	9	<0.3	15	17	46	<0.2	<10	41	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH21.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	10	<0.3	10	22	19	<0.2	10	38	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH21.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	12	<0.3	24	13	18	<0.2	<10	18	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH22.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	16	<0.3	21	23	11	<0.2	<10	41	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH22.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	11	<0.3	18	16	15	<0.2	<10	45	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH23.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	15	<0.3	16	36	41	<0.2	18	81	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH23.C	EOHS	ADE	31.03.2016	1.0	1.5	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	<2	<0.3	21	17	25	<0.2	11	32	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH24.A	EOHS	ADE	31.03.2016	0.1	0.3	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	15	32	50	<0.2	16	61	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH24.C	EOHS	ADE	31.03.2016	1.0	0.2	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	4	<0.3	34	27	37	<0.2	21	55	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH25.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<35	<50	**260**	<100	<0.5	<0.5	<1	<3	<2	<0.3	19	23	55	<0.2	13	43	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH25.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	6	<0.3	28	30	69	<0.2	14	48	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8

STC-09-10099 - Results from soil data collected by ADE at Lot 832 & 833, Gregory Hills Drive, Gledswood Hills NSW

Sample I.D.	Laboratory	Consultant	Date	Depth (m BGL)	PID	Soil type	TRH (without silica gel clean-up) C6-C10 (F1)	TRH C10-C16 (F2)	TRH C16-C34 (F3)	TRH C34-C40 (F4)	BTEX Benzene	BTEX Toluene	BTEX Ethylbenzene	BTEX Xylenes (Total)	Metals Arsenic	Metals Cadmium	Metals Chromium (IV)	Metals Copper	Metals Lead	Metals Mercury	Metals Nickel	Metals Zinc
Residential Land-use (HIL-A) (mg/kg)[1a]							-	-	-	-	-	-	-	-	**100**	**20**	**100**	**6,000**	**300**	**40**	**400**	**7,400**
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg)[1b,3]							**50**	**280**	-	-	**0.7**	**480**	-	**110**	-	-	-	-	-		-	-
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg)[1b,3]							**90**	-	-	-	**1**	-	-	**310**	-	-	-	-	-		-	-
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg)[1b,3]							**150**	-	-	-	**2**	-	-	-	-	-	-	-	-		-	-
Vapour Intrusion - 4m+ (HSL-A) (mg/kg)[1b,3]							**290**	-	-	-	**3**	-	-	-	-	-	-	-	-		-	-
Management Limits - Residential, parkland and public open space (mg/kg)[4, 5]							**800**	**1,000**	**3,500**	**10,000**	-	-	-	-	-	-	-	-	-		-	-
Direct Contact (HSL-A) (mg/kg)[1b]							**5,600**	**4,200**	**5,800**	**8,100**	**140**	**21,000**	**5,900**	**17,000**	-	-	-	-	-		-	-
Intrusive Maintenance Worker - Shallow Trench (mg/kg)[3]							**82,000**	**62,000**	**85,000**	**120,000**	**77**	**120,000**	**85,000**	**130,000**	-	-	-	-	-		-	-
10354-BH26.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	8	<0.3	25	21	44	<0.2	17	60
10354-BH26.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	10	<0.3	27	29	15	<0.2	22	60
10354-BH27.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	8	<0.3	38	28	20	<0.2	18	54
10354-BH27.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	17	21	<10	<0.2	10	46
10354-BH28.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	2	<0.3	13	18	<10	<0.2	<10	32
10354-BH28.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	14	19	<10	<0.2	<10	35
10354-BH29.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	7	<0.3	19	25	10	<0.2	<10	38
10354-BH30.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	14	<0.3	20	28	12	<0.2	<10	33
10354-BH31.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	8	<0.3	22	22	12	<0.2	11	44
10354-BH31.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	8	<0.3	10	24	<10	<0.2	<10	32
10354-BH32.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	6	<0.3	20	31	<10	<0.2	17	46
10354-BH33.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	11	<0.3	12	18	<10	<0.2	<10	25
10354-BH34.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	12	<0.3	18	17	41	<0.2	<10	42
10354-BH34.C	EOHS	ADE	01.04.2016	1.0	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	7	<0.3	14	16	17	<0.2	<10	26
10354-BH35.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	11	<0.3	17	12	33	<0.2	<10	21
10354-BH35.C	EOHS	ADE	01.04.2016	1.0	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	10	<0.3	19	21	13	<0.2	<10	35
10354-BH36.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	4	<0.3	13	15	25	<0.2	<10	24
10354-BH36.C	EOHS	ADE	01.04.2016	1.0	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	9	<0.3	15	37	26	<0.2	21	74
10354-BH37.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	3	<0.3	19	14	26	<0.2	<10	17
10354-BH38.A	EOHS	ADE	01.04.2016	0.1	0.1	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	4	<0.3	20	14	13	<0.2	<10	25
10354-BH38.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	<2	<0.3	16	50	17	<0.2	27	100
10354-BH39.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	3	<0.3	20	24	16	<0.2	14	35
10354-BH40.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	4	<0.3	22	26	<10	<0.2	10	36
10354-BH41.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	3	<0.3	20	39	17	<0.2	27	94
10354-BH42.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	3	<0.3	11	12	<10	<0.2	<10	24
10354-BH43.A	EOHS	ADE	01.04.2016	0.1	0.1	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	10	<0.3	11	17	<10	<0.2	<10	25
10354-BH44.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	4	<0.3	14	24	<10	<0.2	<10	27
10354-BH45.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	9	<0.3	18	17	<10	<0.2	<10	28
10354-BH46.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	21	23	<10	<0.2	11	38
10354-BH47.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	4	<0.3	21	24	<10	<0.2	<10	31
10354-BH48.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<35	<50	<100	<100	<0.5	<0.5	<1	<3	3	<0.3	17	19	31	<0.2	<10	36
10354-BH48.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<35	<50	<100	<100	<0.5	<0.5	<1	<3	<2	<0.3	15	19	<10	<0.2	<10	19
10354-BR1	EOHS	ADE	31.03.2016	1.0	-	-	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	12	22	14	<0.2	<10	33
10354-BR2	EOHS	ADE	31.03.2016	1.0	-	-	<35	<50	<100	<100	<0.5	<0.5	<1	<3	5	<0.3	21	41	12	<0.2	22	66
10354-BR3	EOHS	ADE	01.04.2016	1.0	-	-	<35	<50	<100	<100	<0.5	<0.5	<1	<3	3	<0.3	21	50	21	<0.2	28	110
10354-BR4	EOHS	ADE	01.04.2016	0.1	-	-	<35	<50	<100	<100	<0.5	<0.5	<1	<3	8	<0.3	14	33	<10	<0.2	13	54
10354-SP1	Eurofins | MGT	ADE	31.03.2016	1.0	-	-	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.3	4.6	<0.4	<5	13	6	<0.05	<5	13
10354-SP2	Eurofins | MGT	ADE	31.03.2016	1.0	-	-	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.3	4.9	<0.4	17.0	30	14	<0.05	13	43
10354-SP3	Eurofins | MGT	ADE	01.04.2016	1.0	-	-	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.3	5.9	<0.4	15	45	30	<0.05	28	120
10354-SP4	Eurofins | MGT	ADE	01.04.2016	0.1	-	-	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.3	4	<0.4	6.3	17	8.9	<0.05	<5	12

Sample I.D.	PAHs Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Carcinogenic PAHs (BaP TEQ) [2]	Total PAHs
Residential Land-use (HIL-A) (mg/kg)[1a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3**	**300**
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg)[1b,3]	-	-	-	-	-	-	-	-	-	-	-	-	-	**5**	-	-	-	-
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg)[1b,3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg)[1b,3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 4m+ (HSL-A) (mg/kg)[1b,3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential, parkland and public open space (mg/kg)[4, 5]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact (HSL-A) (mg/kg)[1b]	-	-	-	-	-	-	-	-	-	-	-	-	-	**2,200**	-	-	-	-
Intrusive Maintenance Worker - Shallow Trench (mg/kg)[3]	-	-	-	-	-	-	-	-	-	-	-	-	-	**29,000**	-	-	-	-
10354-BH26.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH26.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH27.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH27.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH28.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH28.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH29.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH30.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH31.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH31.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH32.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH33.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH34.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH34.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH35.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.9**	<0.3	<0.3	<0.3	<0.3	**1.0**	**0.7**	**6.1**
10354-BH35.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH36.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH36.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH37.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH38.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH38.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH39.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH40.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH41.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH42.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH43.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH44.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH45.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH46.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH47.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH48.A	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BH48.C	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BR1	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BR2	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BR3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-BR4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.7	<4.8
10354-SP1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.2	<8.0
10354-SP2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.2	<8.0
10354-SP3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.2	<8.0
10354-SP4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.2	<8.0

Notes to table

ADE - A.D. Envirotech Australia Pty Ltd.

BR - Blind replicate SP - Split Replicate

m BGL - metres below ground level

1 - Site assessment criteria adopted from the 'National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment.

b) Health Screening Levels (HSL) for low-high density residential.

2 - Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their Toxic Equivalency Factor (TEFs) (potency relative to B(a)P). The B(a)P TEQ (Toxic Equivalency Quantity) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF.

3 - Most conservative criteria adopted outlined for via vapour and direct contact exposure pathways. Values adopted for 'Clay' where applicable for screening purposes.

4 - Management Limits for TPH fractions F1-F4 in soil, as per Table 1 B(7) of NEPM 2013.

5 - Most conservative criteria adopted for screening purposes i.e. Fine soil texture.

STC-09-10099 - Results from soil data collected by ADE at Lot 832 & 833, Gregory Hills Drive, Gledswood Hills NSW

							OCPs																		OPPs																		Other		
							Aldrin + Dieldrin	Chlordane	Endosulfan	DDT+DDE+DDD	Heptachlor	a-BHC	b-BHC	d-BHC	g-BHC (lindane)	trans-chlordane	endosulfan sulfate	endrin	endrin aldehyde	endrin ketone	heptachlor epoxide	hexachlorobenzene	methoxychlor	toxaphene	chlorpyrifos	chlorpyrifos methyl	demeton-o	diazinon	dichlorvos	disulfoton	ethoprop	fenitrothion	fensulfothion	fenthion	methyl azinphos	methyl parathion	mevinphos	phorate	prophos	ronnel	trichlorinate	tributylphosphorotrithioite	PCBs (Total)	Cation Exchange Capacity (meq/100g)	pH
Residential Land-use (HIL-A) (mg/kg)[1a]							6	50	270	240	6	-	-	-	-	-	-	-	-	-	-	-	-	20	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 4m+ (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential, parkland and public open space (mg/kg)[4, 5]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact (HSL-A) (mg/kg)[1b]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intrusive Maintenance Worker - Shallow Trench (mg/kg)[3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample I.D.	**Laboratory**	**Consultant**	**Date**	**Depth (m BGL)**	**PID**	**Soil type**																																							
10354-BH01.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	<0.1	-	-	<0.1	<0.6	-	-
10354-BH01.E	EOHS	ADE	31.03.2016	2.0	0.6	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	<0.1	-	-	<0.1	<0.6	-	-
10354-BH02.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.2	-	-	-	-	-	-	-	<0.2	-	-	<0.2	-	-	<0.2	<0.6	-	-
10354-BH02.E	EOHS	ADE	31.03.2016	2.0	8.8	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.3	-	-	-	-	-	-	-	<0.3	-	-	<0.3	-	-	<0.3	<0.6	-	-
10354-BH03.A	EOHS	ADE	31.03.2016	0.1	0.8	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.4	-	-	-	-	-	-	-	<0.4	-	-	<0.4	-	-	<0.4	<0.6	-	-
10354-BH03.C	EOHS	ADE	31.03.2016	1.0	0.9	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.5	-	-	-	-	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	<0.6	-	-
10354-BH04.A	EOHS	ADE	31.03.2016	0.1	1.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.6	-	-	-	-	-	-	-	<0.6	-	-	<0.6	-	-	<0.6	<0.6	-	-
10354-BH04.E	EOHS	ADE	31.03.2016	2.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.7	-	-	-	-	-	-	-	<0.7	-	-	<0.7	-	-	<0.7	<0.6	-	-
10354-BH05.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.8	-	-	-	-	-	-	-	<0.8	-	-	<0.8	-	-	<0.8	<0.6	-	-
10354-BH05.E	EOHS	ADE	31.03.2016	2.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.9	-	-	-	-	-	-	-	<0.9	-	-	<0.9	-	-	<0.9	<0.6	-	-
10354-BH06.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.10	-	-	-	-	-	-	-	<0.10	-	-	<0.10	-	-	<0.10	<0.6	-	-
10354-BH06.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.11	-	-	-	-	-	-	-	<0.11	-	-	<0.11	-	-	<0.11	<0.6	-	-
10354-BH07.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.12	-	-	-	-	-	-	-	<0.12	-	-	<0.12	-	-	<0.12	<0.6	-	-
10354-BH07.C	EOHS	ADE	31.03.2016	1.0	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.13	-	-	-	-	-	-	-	<0.13	-	-	<0.13	-	-	<0.13	<0.6	-	-
10354-BH08.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.14	-	-	-	-	-	-	-	<0.14	-	-	<0.14	-	-	<0.14	<0.6	-	-
10354-BH08.C	EOHS	ADE	31.03.2016	1.0	0.3	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.15	-	-	-	-	-	-	-	<0.15	-	-	<0.15	-	-	<0.15	<0.6	-	-
10354-BH09.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.16	-	-	-	-	-	-	-	<0.16	-	-	<0.16	-	-	<0.16	<0.6	-	-
10354-BH09.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.17	-	-	-	-	-	-	-	<0.17	-	-	<0.17	-	-	<0.17	<0.6	-	-
10354-BH10.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.18	-	-	-	-	-	-	-	<0.18	-	-	<0.18	-	-	<0.18	<0.6	-	-
10354-BH10.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.19	-	-	-	-	-	-	-	<0.19	-	-	<0.19	-	-	<0.19	<0.6	-	-
10354-BH11.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.20	-	-	-	-	-	-	-	<0.20	-	-	<0.20	-	-	<0.20	<0.6	-	-
10354-BH11.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.21	-	-	-	-	-	-	-	<0.21	-	-	<0.21	-	-	<0.21	<0.6	-	-
10354-BH12.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.22	-	-	-	-	-	-	-	<0.22	-	-	<0.22	-	-	<0.22	<0.6	-	-
10354-BH12.E	EOHS	ADE	31.03.2016	2.0	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.23	-	-	-	-	-	-	-	<0.23	-	-	<0.23	-	-	<0.23	<0.6	-	-
10354-BH13.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.24	-	-	-	-	-	-	-	<0.24	-	-	<0.24	-	-	<0.24	<0.6	-	-
10354-BH13.E	EOHS	ADE	31.03.2016	2.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.25	-	-	-	-	-	-	-	<0.25	-	-	<0.25	-	-	<0.25	<0.6	-	-
10354-BH14.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.26	-	-	-	-	-	-	-	<0.26	-	-	<0.26	-	-	<0.26	<0.6	-	-
10354-BH14.C	EOHS	ADE	31.03.2016	1.0	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.27	-	-	-	-	-	-	-	<0.27	-	-	<0.27	-	-	<0.27	<0.6	-	-
10354-BH15.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.28	-	-	-	-	-	-	-	<0.28	-	-	<0.28	-	-	<0.28	<0.6	-	-
10354-BH15.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.29	-	-	-	-	-	-	-	<0.29	-	-	<0.29	-	-	<0.29	<0.6	-	-
10354-BH16.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.30	-	-	-	-	-	-	-	<0.30	-	-	<0.30	-	-	<0.30	<0.6	-	-
10354-BH16.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.31	-	-	-	-	-	-	-	<0.31	-	-	<0.31	-	-	<0.31	<0.6	-	-
10354-BH17.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.32	-	-	-	-	-	-	-	<0.32	-	-	<0.32	-	-	<0.32	<0.6	-	-
10354-BH18.A	EOHS	ADE	31.03.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.33	-	-	-	-	-	-	-	<0.33	-	-	<0.33	-	-	<0.33	<0.6	-	-
10354-BH19.A	EOHS	ADE	31.03.2016	0.1	0.3	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.34	-	-	-	-	-	-	-	<0.34	-	-	<0.34	-	-	<0.34	<0.6	-	-
10354-BH19.C	EOHS	ADE	31.03.2016	1.0	0.2	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.35	-	-	-	-	-	-	-	<0.35	-	-	<0.35	-	-	<0.35	<0.6	-	-
10354-BH20.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.36	-	-	-	-	-	-	-	<0.36	-	-	<0.36	-	-	<0.36	<0.6	-	-
10354-BH20.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.37	-	-	-	-	-	-	-	<0.37	-	-	<0.37	-	-	<0.37	<0.6	-	-
10354-BH21.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.38	-	-	-	-	-	-	-	<0.38	-	-	<0.38	-	-	<0.38	<0.6	-	-
10354-BH21.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.39	-	-	-	-	-	-	-	<0.39	-	-	<0.39	-	-	<0.39	<0.6	-	-
10354-BH22.A	EOHS	ADE	31.03.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.40	-	-	-	-	-	-	-	<0.40	-	-	<0.40	-	-	<0.40	<0.6	-	-
10354-BH22.C	EOHS	ADE	31.03.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.41	-	-	-	-	-	-	-	<0.41	-	-	<0.41	-	-	<0.41	<0.6	-	-
10354-BH23.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.42	-	-	-	-	-	-	-	<0.42	-	-	<0.42	-	-	<0.42	<0.6	-	-
10354-BH23.C	EOHS	ADE	31.03.2016	1.0	1.5	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.43	-	-	-	-	-	-	-	<0.43	-	-	<0.43	-	-	<0.43	<0.6	-	-
10354-BH24.A	EOHS	ADE	31.03.2016	0.1	0.3	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.44	-	-	-	-	-	-	-	<0.44	-	-	<0.44	-	-	<0.44	<0.6	-	-
10354-BH24.C	EOHS	ADE	31.03.2016	1.0	0.2	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.45	-	-	-	-	-	-	-	<0.45	-	-	<0.45	-	-	<0.45	<0.6	-	-
10354-BH25.A	EOHS	ADE	31.03.2016	0.1	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.46	-	-	-	-	-	-	-	<0.46	-	-	<0.46	-	-	<0.46	<0.6	-	-

STC-09-10099 - Results from soil data collected by ADE at Lot 832 & 833, Gregory Hills Drive, Gledswood Hills NSW

							OCPs																		OPPs																		Other		
							Aldrin + Dieldrin	Chlordane	Endosulfan	DDT+DDE+DDD	Heptachlor	a-BHC	b-BHC	d-BHC	g-BHC (lindane)	trans-chlordane	endosulfan sulfate	endrin	endrin aldehyde	endrin ketone	heptachlor epoxide	hexachlorobenzene	methoxychlor	toxaphene	chlorpyrifos	chlorpyrifos methyl	demeton-o	diazinon	dichlorvos	disulfoton	ethoprop	fenitrothion	fensulfothion	fenthion	methyl azinphos	methyl parathion	mevinphos	phorate	prophos	ronnel	trichlorinate	tributylphosphorotrithioite	PCBs (Total)	Cation Exchange Capacity (meq/100g)	pH
Residential Land-use (HIL-A) (mg/kg)[1a]							6	50	270	240	6	-	-	-	-	-	-	-	-	-	-	-	-	20	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 4m+ (HSL-A) (mg/kg)[1b,3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential, parkland and public open space (mg/kg)[4, 5]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact (HSL-A) (mg/kg)[1b]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intrusive Maintenance Worker - Shallow Trench (mg/kg)[3]							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample I.D.	**Laboratory**	**Consultant**	**Date**	**Depth (m BGL)**	**PID**	**Soil type**																																							
10354-BH25.C	EOHS	ADE	31.03.2016	1.0	0.2	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.47	-	-	-	-	-	-	-	<0.47	-	-	<0.47	-	-	<0.47	<0.6	-	5.9
10354-BH26.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.48	-	-	-	-	-	-	-	<0.48	-	-	<0.48	-	-	<0.48	<0.6	-	-
10354-BH26.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.49	-	-	-	-	-	-	-	<0.49	-	-	<0.49	-	-	<0.49	<0.6	-	-
10354-BH27.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.50	-	-	-	-	-	-	-	<0.50	-	-	<0.50	-	-	<0.50	<0.6	-	-
10354-BH27.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.51	-	-	-	-	-	-	-	<0.51	-	-	<0.51	-	-	<0.51	<0.6	-	-
10354-BH28.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.52	-	-	-	-	-	-	-	<0.52	-	-	<0.52	-	-	<0.52	<0.6	-	-
10354-BH28.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.53	-	-	-	-	-	-	-	<0.53	-	-	<0.53	-	-	<0.53	<0.6	-	-
10354-BH29.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.54	-	-	-	-	-	-	-	<0.54	-	-	<0.54	-	-	<0.54	<0.6	-	-
10354-BH30.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.55	-	-	-	-	-	-	-	<0.55	-	-	<0.55	-	-	<0.55	<0.6	-	-
10354-BH31.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.56	-	-	-	-	-	-	-	<0.56	-	-	<0.56	-	-	<0.56	<0.6	-	-
10354-BH31.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.57	-	-	-	-	-	-	-	<0.57	-	-	<0.57	-	-	<0.57	<0.6	-	-
10354-BH32.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.58	-	-	-	-	-	-	-	<0.58	-	-	<0.58	-	-	<0.58	<0.6	-	-
10354-BH33.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.59	-	-	-	-	-	-	-	<0.59	-	-	<0.59	-	-	<0.59	<0.6	-	-
10354-BH34.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.60	-	-	-	-	-	-	-	<0.60	-	-	<0.60	-	-	<0.60	<0.6	-	-
10354-BH34.C	EOHS	ADE	01.04.2016	1.0	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.61	-	-	-	-	-	-	-	<0.61	-	-	<0.61	-	-	<0.61	<0.6	-	5.1
10354-BH35.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.62	-	-	-	-	-	-	-	<0.62	-	-	<0.62	-	-	<0.62	<0.6	-	-
10354-BH35.C	EOHS	ADE	01.04.2016	1.0	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.63	-	-	-	-	-	-	-	<0.63	-	-	<0.63	-	-	<0.63	<0.6	-	-
10354-BH36.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.64	-	-	-	-	-	-	-	<0.64	-	-	<0.64	-	-	<0.64	<0.6	-	-
10354-BH36.C	EOHS	ADE	01.04.2016	1.0	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.65	-	-	-	-	-	-	-	<0.65	-	-	<0.65	-	-	<0.65	<0.6	-	-
10354-BH37.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.66	-	-	-	-	-	-	-	<0.66	-	-	<0.66	-	-	<0.66	<0.6	-	-
10354-BH38.A	EOHS	ADE	01.04.2016	0.1	0.1	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.67	-	-	-	-	-	-	-	<0.67	-	-	<0.67	-	-	<0.67	<0.6	-	-
10354-BH38.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.68	-	-	-	-	-	-	-	<0.68	-	-	<0.68	-	-	<0.68	<0.6	-	-
10354-BH39.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.69	-	-	-	-	-	-	-	<0.69	-	-	<0.69	-	-	<0.69	<0.6	-	-
10354-BH40.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.70	-	-	-	-	-	-	-	<0.70	-	-	<0.70	-	-	<0.70	<0.6	-	-
10354-BH41.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.71	-	-	-	-	-	-	-	<0.71	-	-	<0.71	-	-	<0.71	<0.6	-	-
10354-BH42.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.72	-	-	-	-	-	-	-	<0.72	-	-	<0.72	-	-	<0.72	<0.6	-	5.1
10354-BH43.A	EOHS	ADE	01.04.2016	0.1	0.1	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.73	-	-	-	-	-	-	-	<0.73	-	-	<0.73	-	-	<0.73	<0.6	-	-
10354-BH44.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.74	-	-	-	-	-	-	-	<0.74	-	-	<0.74	-	-	<0.74	<0.6	-	-
10354-BH45.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.75	-	-	-	-	-	-	-	<0.75	-	-	<0.75	-	-	<0.75	<0.6	-	-
10354-BH46.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.76	-	-	-	-	-	-	-	<0.76	-	-	<0.76	-	-	<0.76	<0.6	-	-
10354-BH47.A	EOHS	ADE	01.04.2016	0.1	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.77	-	-	-	-	-	-	-	<0.77	-	-	<0.77	-	-	<0.77	<0.6	-	-
10354-BH48.A	EOHS	ADE	01.04.2016	0.1	0.0	Fill	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.78	-	-	-	-	-	-	-	<0.78	-	-	<0.78	-	-	<0.78	<0.6	-	-
10354-BH48.C	EOHS	ADE	01.04.2016	1.0	0.0	Residual	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.79	-	-	-	-	-	-	-	<0.79	-	-	<0.79	-	-	<0.79	<0.6	-	-
10354-BR1	EOHS	ADE	31.03.2016	1.0	-	-	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.80	-	-	-	-	-	-	-	<0.80	-	-	<0.80	-	-	<0.80	<0.6	-	-
10354-BR2	EOHS	ADE	31.03.2016	1.0	-	-	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.81	-	-	-	-	-	-	-	<0.81	-	-	<0.81	-	-	<0.81	<0.6	-	-
10354-BR3	EOHS	ADE	01.04.2016	1.0	-	-	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.82	-	-	-	-	-	-	-	<0.82	-	-	<0.82	-	-	<0.82	<0.6	-	-
10354-BR4	EOHS	ADE	01.04.2016	0.1	-	-	<0.2	<0.1	<0.5	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.83	-	-	-	-	-	-	-	<0.83	-	-	<0.83	-	-	<0.83	<0.6	-	-
10354-SP1	Eurofins | MGT	ADE	31.03.2016	1.0	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	-	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	-	13	-
10354-SP2	Eurofins | MGT	ADE	31.03.2016	1.0	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	-	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	-	17	-
10354-SP3	Eurofins | MGT	ADE	01.04.2016	1.0	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	-	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	-	15	-
10354-SP4	Eurofins | MGT	ADE	01.04.2016	0.1	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	-	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	-	15	-

Notes to table

ADE - A.D. Envirotech Australia Pty Ltd.

BR - Blind replicate

SP - Split Replicate

m BGL - metres below ground level

1 - Site assessment criteria adopted from the 'National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment.

b) Health Screening Levels (HSL) for low-high density residential.

2 - Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their Toxic Equivalency Factor (TEFs) (potency relative to B(a)P). The B(a)P TEQ (Toxic Equivalency Quantity) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF.

3 - Most conservative criteria adopted outlined for via vapour and direct contact exposure pathways. Values adopted for 'Clay' where applicable for screening purposes.

4 - Management Limits for TPH fractions F1-F4 in soil, as per Table 1 B(7) of NEPM 2013.

5 - Most conservative criteria adopted for screening purposes i.e. Fine soil texture.

QA/QC Table 1: Soil Blind replicate (duplicate) samples compared with primary samples

	DL EOHS	10354-BH08.C	10354-BR1	RPD, %	10354-BH25.C	10354-BR2	RPD, %	10354-BH34.C	10354-BR3	RPD, %	10354-BH42.A	10354-BR4	RPD, %
Benzene	0.5	<0.5	<0.5	0.0	<0.5	<0.5	0.0	<0.5	<0.5	0.0	<0.5	<0.5	0.0
Toluene	0.5	<0.5	<0.5	0.0	<0.5	<0.5	0.0	<0.5	<0.5	0.0	<0.5	<0.5	0.0
Ethylbenzene	1	<1	<1	0.0	<1	<1	0.0	<1	<1	0.0	<1	<1	0.0
Xylenes	3	<3	<3	0.0	<3	<3	0.0	<3	<3	0.0	<3	<3	0.0
Benzo(a)pyrene	0.3	<0.3	<0.3	0.0	<0.3	<0.3	0.0	<0.3	<0.3	0.0	<0.3	<0.3	0.0
Total PAH	4.8	<4.8	<4.8	0.0	<4.8	<4.8	0.0	<4.8	<4.8	0.0	<4.8	<4.8	0.0
Total PCBs	0.6	<0.6	<0.6	0.0	<0.6	<0.6	0.0	<0.6	<0.6	0.0	<0.6	<0.6	0.0
TRH C_6-C_{10}	35	<35	<35	0.0	<35	<35	0.0	<35	<35	0.0	<35	<35	0.0
TRH C_{10}-C_{16}	50	<50	<50	0.0	<50	<50	0.0	<50	<50	0.0	<50	<50	0.0
TRH C_{16}-C_{34}	100	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0
TRH C_{34}-C_{40}	100	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0
Arsenic	2	16	4.5	112	6	4.8	30	7	3.2	77	2.9	8.4	96.0
Cadmium	0.3	<0.3	<0.3	0.0	<0.3	<0.3	0.0	<0.3	<0.3	0.0	<0.3	<0.3	0.0
Chromium	5	13	12	13	28	21	26	14	21	36	11	13.8	23.0
Copper	5	22	22	2	30	41	31	16	50	104	12	33	91.0
Lead	10	17	14	17	69	12	141	17	21	21	<10	<10	0.0
Mercury	0.2	<0.2	<0.2	0.0	<0.2	<0.2	0.0	<0.2	<0.2	0.0	<0.2	<0.2	0.0
Nickel	10	12	<10	0.0	14	22	48	<10	28	0.0	<10	13	0.0
Zinc	5	47	33	37	48	66	32	26	110	123	24	54	75.0

V - valid result	68
N - not valid result	8

QA/QC Table 2: Soil Split replicate samples compared with primary samples

	DL EOHS/ MGT (mg/kg)	10099-BH03.G	10099-SP1	RPD, %	10099-BH03.G	10099-SP1	RPD, %	10099-BH03.G	10099-SP1	RPD, %	10099-BH06.E	10099-SP2	RPD, %
Benzene	0.5/0.1	<0.5	<0.1	0.0	<0.5	<0.1	0.0	<0.5	<0.1	0.0	<0.5	<0.1	0.0
Toluene	0.5/0.1	<0.5	<0.1	0.0	<0.5	<0.1	0.0	<0.5	<0.1	0.0	<0.5	<0.1	0.0
Ethylbenzene	1/0.1	<1	<0.1	0.0	<1	<0.1	0.0	<1	<0.1	0.0	<1	<0.1	0.0
Xylenes	3/0.3	<3	<0.3	0.0	<3	<0.3	0.0	<3	<0.3	0.0	<3	<0.3	0.0
Benzo(a)pyrene	0.3/0.5	<0.3	<0.5	0.0	<0.3	<0.5	0.0	<0.3	<0.5	0.0	<0.3	<0.5	0.0
Total PAH	4.8/8.0	<4.8	<8	0.0	<4.8	<8	0.0	<4.8	<8	0.0	<4.8	<8	0.0
TRH C_6-C_{10}	35/20	<35	<20	0.0	<35	<20	0.0	<35	<20	0.0	<35	<20	0.0
TRH C_{10}-C_{16}	50	<50	<50	0.0	<50	<50	0.0	<50	<50	0.0	<50	<50	0.0
TRH C_{16}-C_{34}	100	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0
TRH C_{34}-C_{40}	100	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0	<100	<100	0.0
Arsenic	2	16	4.6	111	6	4.9	27	7	5.9	21	2.9	4.0	31.0
Cadmium	0.3/0.4	<0.3	<0.4	0.0	<0.3	<0.4	0.0	<0.3	<0.4	0.0	<0.3	<0.4	0.0
Chromium	5	13	<5	0.0	28	17	47	14	15	-4	11	6.3	54.1
Copper	5	22	13	51	30	30	0.0	16	45	97	12	17	33.0
Lead	10.0/5.0	17	6	101	69	14	132	17	30	56	<10	9	0.0
Mercury	0.2/0.05	<0.2	<0.05	0.0	<0.2	<0.05	0.0	<0.2	<0.05	0.0	<0.2	<0.05	0.0
Nickel	10.0/5.0	12	<5	0.0	14	13	6	<10	28	0.0	<10	<5	0.0
Zinc	5	47	13	114	48	43	10	26	120	128	24	12	23.0

V - valid result	62
N - not valid result	10

QA/QC Table 3: Analysis results for trip blank samples

Analyte	PQL	10354-Trip Blank-1	10354-Trip Blank-2
Benzene	1	<1	<1
Toluene	1	<1	<1
Ethyl Benzene	1	<1	<1
m, p- Xylene(s)	2	<2	<2
o-Xylene	1	<1	<1
	V - valid result		10
	N - not valid result		0

QA/QC Table 4: Analysis results for trip spike samples

Analyte	Acceptable range, %	10354-TripSpike concentrations (ug/L)	10354-Trip Spike1	10354-Trip Spike2
Benzene	60 - 140	40	103%	111%
Toluene	60 - 140	40	100%	105%
Ethyl Benzene	60 - 140	40	100%	100%
m, p- Xylene(s)	60 - 140	40	99%	100%
o-Xylene	60 - 140	40	99%	102%
	V - valid result			10
	N - not valid result			0

APPENDIX III – SAMPLE MAP

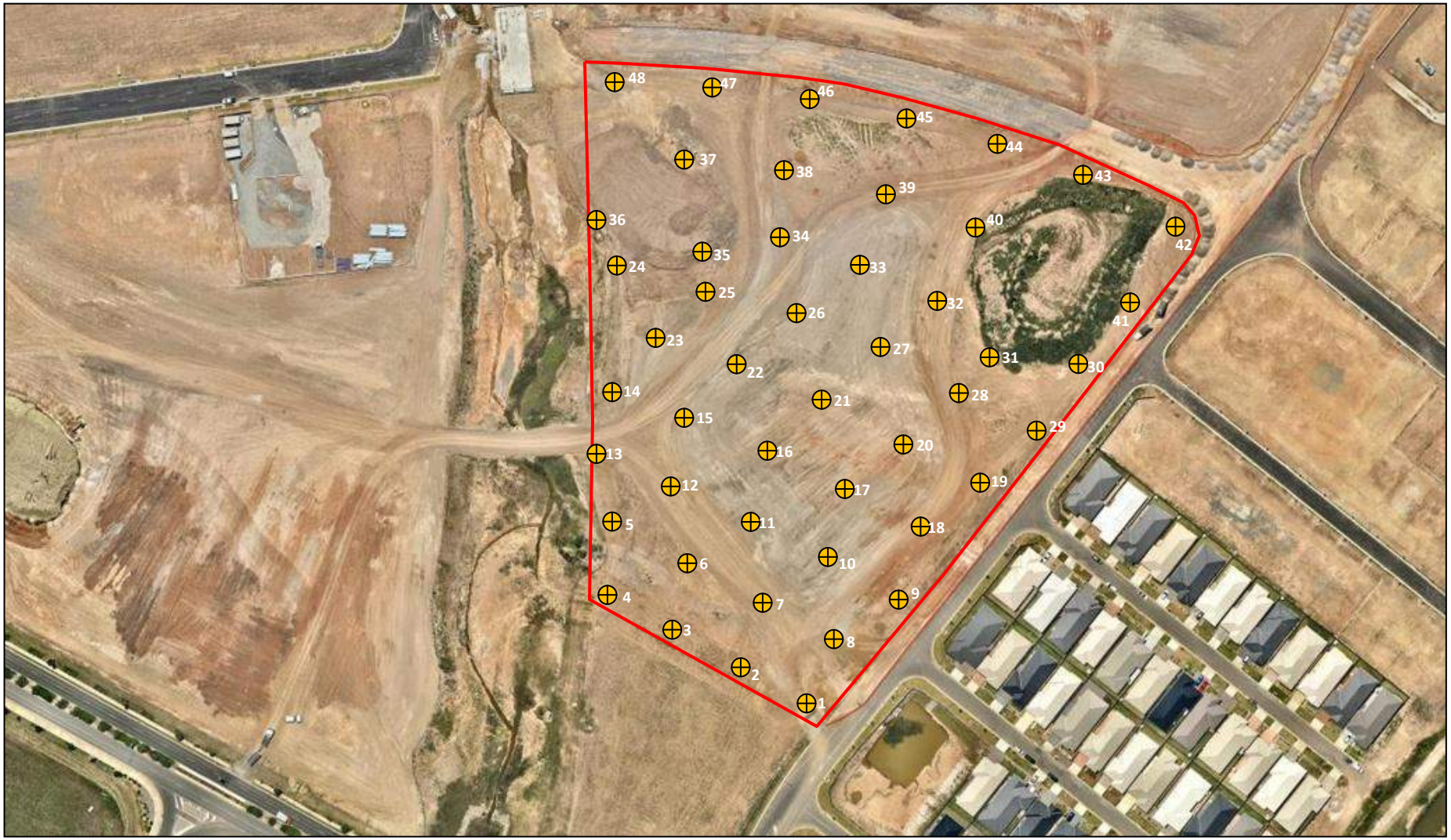

Figure 2. Approximate locations of boreholes undertaken during the investigation on the 31.03.2016 and the 01.04.2016. Image adapted from NearMap, accessed 30.03.2016.

APPENDIX IV – BOREHOLE LOGS AND SOIL STRATIGRAPHY

BOREHOLE NUMBER BH 01

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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY GRAVELLY CLAY, low plasticity, brown, dry		
							BH01.A	PID = 0
			1.0					PID = 0.3
			1.5					
			2.0				BH01.E	PID = 0.6
			2.5			RESIDUAL: SILTY CLAY, low to high plasticity, brown - orange, dry to moist.		PID = 0.0
			3.0			Borehole BH 01 terminated at 2.6m		
			3.5					

BOREHOLE NUMBER BH 02

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY GRAVELLY CLAY, trace of sand, low plasticity, brown, dry		PID = 0.3
			1.0				BH2.C	PID = 0.1
			1.5					
			2.0				BH2.E	PID = 8.8
			2.5			RESIDUAL: SILTY CLAY, medium plasticity, brown - orange, dry to moist.		
			3.0			Borehole BH 02 terminated at 2.8m		
			3.5					

BOREHOLE NUMBER BH 03

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sand, low plasticity, brown, dry		
							BH03.A	PID = 0.8
			1.0					
			1.5				BH03.C	PID = 0.9
			2.0					
			2.5			RESIDUAL: SILTY CLAY, high plasticity, brown - orange, dry to moist.		PID = 0.1
			3.0					
			3.5			Borehole BH 03 terminated at 3m		

BOREHOLE NUMBER BH 04

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry	BH04.A	PID = 1.0
			1.0					PID = 0.4
			1.5					
			2.0					
			2.5			FILL: SILTY CLAY, with gravels, low plasticity, brown - orange, moist.	BH04.E	PID = 0.1
			3.0					
			3.5			RESIDUAL: SILTY CLAY, low to high plasticity, brown - orange, moist. Borehole BH 04 terminated at 3m		PID = 0.3

BOREHOLE NUMBER BH 05

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, grey - brown, dry		PID = 0.3
			1.0				BH05.C	PID = 0.2
			1.5					
			2.0				BH05.E	PID = 0.1
			2.5					
			3.0					
			3.5			RESIDUAL: SILTY CLAY, low to high plasticity, brown - orange, moist. Borehole BH 05 terminated at 3m		PID = 0.0

BOREHOLE NUMBER BH 06

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry	BH06.A	PID = 0.1
			1.0				BH06.C	PID = 0.1
			1.5					
			2.0					PID = 0.3
			2.5					
			3.0					
			3.5			RESIDUAL: SILTY CLAY, low to high plasticity, brown - orange, moist. Borehole BH 06 terminated at 3m		PID = 0.2

BOREHOLE NUMBER BH 07

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown - grey, dry	BH07.A	PID = 0.2
			1.0				BH07.C	PID = 0.1
			1.5					
			2.0					
			2.5			RESIDUAL: SILTY CLAY, medium plasticity, brown - orange, moist.		PID = 0.1
			3.0			Borehole BH 07 terminated at 2.5m		
			3.5					

BOREHOLE NUMBER BH 08

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown - grey, dry		
							BH08.A	PID = 0.0
			1.0					
							BH08.C, BR 1, SP 1	PID = 0.3
			1.5					
			2.0					
						RESIDUAL: SILTY CLAY, low to high plasticity, dark brown - orange, moist.		PID = 0.1
			2.5					
						Borehole BH 08 terminated at 2.5m		PID = 0.0
			3.0					
			3.5					

BOREHOLE NUMBER BH 09

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown - grey, dry		
							BH09.A	PID = 0.0
			1.0				BH09.C	PID = 0.1
			1.5			RESIDUAL: SILTY CLAY,medium to high plasticity, brown - orange, moist.		PID = 0.1
						Borehole BH 09 terminated at 1.5m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 10

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown - grey, dry		
							BH10.A	PID = 0.1
			1.0					
							BH10.C	PID = 0.2
			1.5					
						RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange - grey, moist.		
			2.0					PID = 0.1
						Borehole BH 10 terminated at 2.2m		
			2.5					
			3.0					
			3.5					

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BOREHOLE NUMBER BH 11

CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown - grey, dry		
							BH11.A	PID = 0.2
			1.0				BH11.C	PID = 0.1
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, orange, moist.		
			2.0			Borehole BH 11 terminated at 1.5m		PID = 0.0
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 12

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DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown - grey, dry	BH12.A	PID = 0.1
			1.0					PID = 0.1
			1.5					
			2.0				BH12.E	PID = 0.2
			2.5					
			3.0			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		PID = 0.1
			3.5					

Borehole BH 12 terminated at 3.5m

BOREHOLE NUMBER BH 13

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DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION**

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry		PID = 0.3
			1.0				BH13.C	PID = 0.2
			1.5					
			2.0			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, orange - red, moist	BH13.E	PID = 0.1
			2.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		
			3.0			Borehole BH 13 terminated at 3m		
			3.5					

BOREHOLE NUMBER BH 14

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry		
							BH14.A	PID = 0.2
			1.0					
							BH14.C	PID = 0.0
			1.5					
			2.0					
						RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		PID = 0.0
			2.5			Borehole BH 14 terminated at 2m		
			3.0					
			3.5					

BOREHOLE NUMBER BH 15

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DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown - orange, dry		
							BH15.A	PID = 0.
			1.0				BH15.C	PID = 0.
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		
			2.0			Borehole BH 15 terminated at 1.5m		PID = 0.
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 16

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DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, dark brown, dry		
							BH16.A	PID = 0.2
			1.0				BH16.C	PID = 0.1
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, orange - brown, moist. Borehole BH 16 terminated at 1.5m		PID = 0.1
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 17

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, orange - grey, dry		
							BH17.A	PID = 0.2
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist. Borehole BH 17 terminated at 1m		PID = 0.2
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 18

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, trace of sands, low plasticity, orange - grey, dry		
			1.0				BH18.A	PID = 0.1
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist. Borehole BH 18 terminated at 1m		PID = 0.1
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 19

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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 31/3/16 **COMPLETED** 31/3/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, trace of sands, low plasticity, red - orange, dry		
			1.0				BH19.A	PID = 0.3
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist. Borehole BH 19 terminated at 1m	BH19.C	PID = 0.2
			2.0					
			2.5					
			3.0					
			3.5					

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BOREHOLE NUMBER BH 20

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown - orange, dry		
							BH20.A	PID = 0.1
			1.0				BH20.C	PID = 0.2
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist. Borehole BH 20 terminated at 1.5m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 21

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown - grey, dry		
							BH21.A	PID = 0.1
			1.0				BH21.C	PID = 0.1
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, grey - orange, moist.		
						Borehole BH 21 terminated at 1.5m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 22

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, orange - brown, dry		
							BH22.A	PID = 0.1
			1.0					
							BH22.C	PID = 0.1
			1.5					
			2.0			RESIDUAL: SILTY CLAY, medium to high plasticity,red - orange, moist.		
			2.5			Borehole BH 22 terminated at 2m		PID = 0.0
			3.0					
			3.5					

BOREHOLE NUMBER BH 23

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, orange - brown, dry		
							BH23.A	PID = 0.2
			1.0				BH23.C	PID = 1.5
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		
			2.0			Borehole BH 23 terminated at 2m		PID = 0.2
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 24

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry		
							BH24.A	PID = 0.3
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, brown / orange, moist.		
			1.5				BH24.C	PID = 0.2
			2.0			Borehole BH 24 terminated at 2m		
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 25

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						FILL: SILTY CLAY, with gravels, low plasticity, red - orange, dry		
							BH25.A	PID = 0.2
			0.5					
			1.0				BH25.C, BR 2, SP 2	PID = 0.2
						RESIDUAL: SILTY CLAY, medium to high plasticity, red - grey, moist.		
			1.5			Borehole BH 25 terminated at 1.5m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 26

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry		
							BH26.A	PID = 0.0
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, orange - grey, moist.		
			1.5				BH26.C	PID = 0.0
						Borehole BH 26 terminated at 1.5m		PID = 0.0
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 27

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						FILL: SILTY CLAY, with crushed shale, low plasticity, red - brown, dry		
							BH27.A	PID = 0.
			0.5			RESIDUAL: SILTY CLAY, medium to high plasticity, orange - brown, moist.		
			1.0				BH27.C	PID = 0.0
						Borehole BH 27 terminated at 1.2m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 28

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, medium plasticity, orange - grey, moist.		
							BH28.A	PID = 0.0
			1.0			RESIDUAL: SILTY CLAY, medium plasticity, orange - grey, moist.		
			1.5				BH28.C	PID = 0.0
						Borehole BH 28 terminated at 1.5m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 29

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, medium plasticity, orange - grey, moist.		
							BH29.A	PID = 0.0
			1.0			RESIDUAL: SILTY CLAY, medium plasticity, grey - red, moist. Borehole BH 29 terminated at 1m		PID = 0.0
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

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BOREHOLE NUMBER BH 30

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						FILL: SILTY CLAY, with gravels, medium plasticity, orange - grey, moist.		
							BH30.A	PID = 0.0
			0.5			RESIDUAL: SILTY CLAY, medium plasticity, grey - red, moist.		
			1.0			Borehole BH 30 terminated at 1m		PID = 0.0
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 31

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, medium plasticity, red - orange, moist.		
							BH31.A	PID = 0.0
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, grey - orange, moist.		
							BH31.C	PID = 0.0
			1.5			Borehole BH 31 terminated at 1.2m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 32

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist.		
			0.5 1.0 1.5 2.0 2.5 3.0 3.5			Borehole BH 32 terminated at 0.2m	BH32.A	PID = 0.0

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BOREHOLE NUMBER BH 33

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						FILL: SILTY CLAY, with gravels, low plasticity, brown - orange, dry.		
							BH33.A	PID = 0.0
			0.5			RESIDUAL: SILTY CLAY, medium to high plasticity, grey - red, moist. Borehole BH 33 terminated at 0.3m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 34

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown, dry.		
							BH34.A	PID = 0.0
			1.0					
							BH34.C, SP 3, BR 3	PID = 0.0
			1.5					
			2.0			RESIDUAL: SILTY CLAY, medium to high plasticity, grey - orange, moist.		
						Borehole BH 34 terminated at 2m		PID = 0.0
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 35

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, trace of sands, low plasticity, brown, dry.		
							BH35.A	PID = 0.0
			1.0				BH35.C	PID = 0.1
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist. Borehole BH 35 terminated at 1.5m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 36

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown, dry.		
							BH36.A	PID = 0.0
			1.0					
							BH36.C	PID = 0.0
			1.5					
			2.0			RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist.		
						Borehole BH 36 terminated at 2m		PID = 0.0
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 37

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DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown, dry.		
			1.0				BH37.A	PID = 0.0
			1.5			RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist. Borehole BH 37 terminated at 1m		
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 38

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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low plasticity, brown - orange, dry.	BH38.A	PID = 0.1
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist.		
			1.5			Borehole BH 38 terminated at 1m	BH38.C	PID = 0.0
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 39

ADE CONSULTING GROUP
New South Wales Office:
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Silverwater, NSW 2128
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Site:www.ADenvirotech.com.au
E-mail: info@ADenvirotech.com.au

CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist.		
							BH39.A	PID = 0.0
						Borehole BH 39 terminated at 0.3m		
			0.5					
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 40

ADE CONSULTING GROUP
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Silverwater, NSW 2128
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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION**

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		
							BH40.A	PID = 0.0
						Borehole BH 40 terminated at 0.3m		
			0.5					
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

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E-mail: info@ADenvirotech.com.au

BOREHOLE NUMBER BH 41

CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY CLAY, with gravels, low to medium plasticity, brown - orange, dry.		
							BH41.A	PID = 0.0
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist. Borehole BH 41 terminated at 0.6m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 42

ADE CONSULTING GROUP
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E-mail: info@ADenvirotech.com.au

CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, red - grey, moist.		
							BH42.A, BR 4, SP 4	PID = 0.0
						Borehole BH 42 terminated at 0.3m		
			0.5					
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 43

ADE CONSULTING GROUP

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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, red - grey, moist.		
							BH43.A	PID = 0.1
			0.5			Borehole BH 43 terminated at 0.4m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 44

ADE CONSULTING GROUP
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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION**

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, red - grey, moist.		
							BH44.A	PID = 0.0
						Borehole BH 44 terminated at 0.3m		
			0.5					
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 45

ADE CONSULTING GROUP
New South Wales Office:
A. D. Envirotech Australia Pty Ltd
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Silverwater, NSW 2128
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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, red - orange, moist.		
							BH45.A	PID = 0.0
			0.5			Borehole BH 45 terminated at 0.3m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 46

ADE CONSULTING GROUP
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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** **DATUM**

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION**

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT						RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist.		
							BH46.A	PID = 0.0
			0.5			Borehole BH 46 terminated at 0.4m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

BOREHOLE NUMBER BH 47

ADE CONSULTING GROUP
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CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			RESIDUAL: SILTY CLAY, medium to high plasticity, brown - orange, moist.	BH47.A	PID = 0.0
			1.0			Borehole BH 47 terminated at 0.6m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					

ADE CONSULTING GROUP

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BOREHOLE NUMBER BH 48

CLIENT Gregory Hills Corporate Park **PROJECT NAME** Gregory Hills

PROJECT NUMBER STC-76-10354 **PROJECT LOCATION** Lot 846, Gregory Hills Drive

DATE STARTED 1/4/16 **COMPLETED** 1/4/16 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR EGDS **SLOPE** 90° **BEARING** ---

EQUIPMENT Comacchio Geo205 **HOLE LOCATION** _____

HOLE SIZE 100 mm **LOGGED BY** SR **CHECKED BY** BD

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			FILL: SILTY GRAVELLY CLAY, low plasticity, brown - orange, dry.	BH48.A	PID = 0.0
			1.0			RESIDUAL: SILTY CLAY, medium to high plasticity, red - grey, moist.	BH48.C	PID = 0.0
			1.5			Borehole BH 48 terminated at 1.5m		PID = 0.0
			2.0					
			2.5					
			3.0					
			3.5					

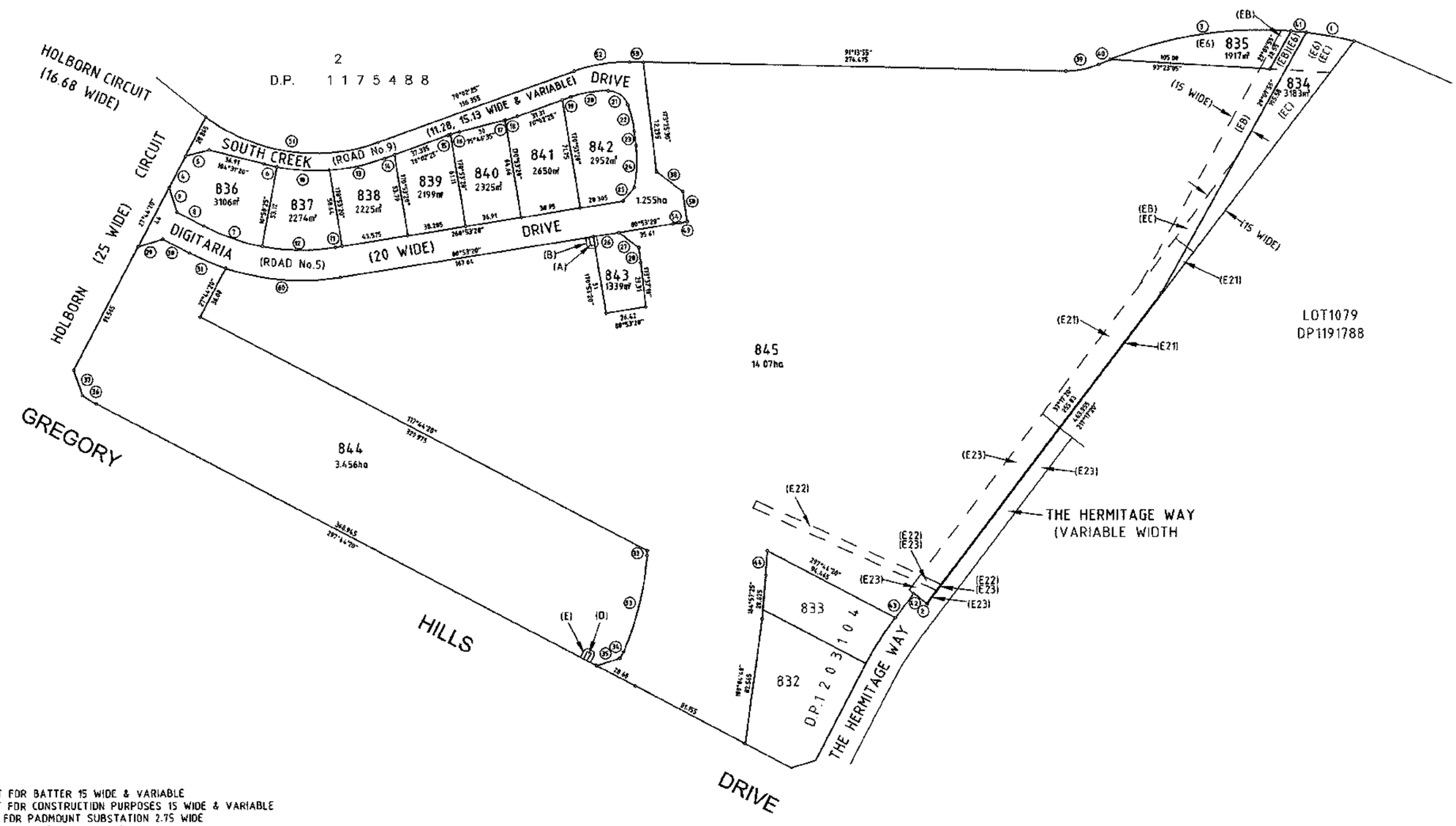
APPENDIX V – CALIBRATION CERTIFICATES

APPENDIX VI – SITE PLANS

STAGE3-REVISION 11 - 30-04-15 STAGE 3
PLAN SUBJECT TO COUNCIL APPROVAL.
DIMENSIONS AND AREAS SUBJECT TO FINAL SURVEY

SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	CHORD	ARC	RADIUS	No	BEARING	CHORD	ARC	RADIUS	No.	BEARING	CHORD	ARC	RADIUS
1	100°08'05"	34.19	34.81	240	22	166°44'05"	12.78	12.82	96.3	43	217°17'20"	20		
2	307°17'20"	0.65			23	173°25'30"	9.62			44	181°35'10"	36		
3	89°02'35"	124.275	121.375	240	24	182°23'45"	27.33	27.445	86.85	45	16°24'38"	87.75	88.695	281
4	27°44'28"	23.295			25	39°55'05"	11.665			46	359°54'35"	95.955	96.855	689.935
5	75°28'20"	16.14			26	88°53'20"	17.83			47	174°05'15"	16.62		
6	103°44'40"	0.915	0.915	131.28	27	127°29'20"	16.49			48	37°33'00"	17.42		
7	289°17'10"	40.595	40.7	138	28	174°05'15"	9.355			49	91°44'15"	4.47	4.47	498
8	117°44'28"	19.825			29	72°44'20"	16.97			50	171°59'55"	20		
9	162°44'28"	16.97			30	117°44'28"	19.825			51	98°26'20"	114.16	118.96	120
10	93°34'18"	34.4	34.5	131.28	31	113°06'58"	25.48	25.585	150	52	86°38'15"	36.78	36.99	180
11	260°53'20"	4.595			32	6°29'55"	3.105			53	91°43'55"	9.815		
12	219°15'55"	47.81	48.85	138	33	194°00'58"	64.92	65.23	193.32	54	261°18'40"	5.1	5.1	498
13	78°03'25"	36.62	36.74	131.28	34	30°44'38"	4.885			55	279°18'58"	99.875	101.615	158
14	76°02'25"	7.125			35	73°14'45"	16.09			56	99°18'45"	87.23	88.755	138
15	76°38'50"	1.645	1.645	77.7	36	280°56'38"	10.65	10.655	95.25	57	252°54'38"	9.335	9.24	92.9
16	73°30'55"	6.135	6.135	77.7	37	34°25'30"	17.605			58	252°54'38"	7.775	7.78	77.7
17	75°28'59"	0.955	0.955	92.3	38	122°23'05"	21.52			59	267°31'55"	78.915	80.165	131.28
18	72°36'45"	8.285	8.29	92.3	39	78°32'55"	21.96	22.14	58	60	96°41'20"	75.375	76.11	150
19	70°02'25"	5.92			40	46°56'00"	8.2	8.2	268	61	173°37'10"	2.99		
20	88°16'25"	24.81	24.955	66.3	41	95°31'25"	10.045	10.045	268	62	179°56'25"	93.44	93.535	593.315
21	125°49'40"	15.745	16.745	16.695	42	307°17'20"	10.55							



(EB) EASEMENT FOR BATTER 15 WIDE & VARIABLE
(EC) EASEMENT FOR CONSTRUCTION PURPOSES 15 WIDE & VARIABLE
(A) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE
(B) RESTRICTION ON THE USE OF LAND
(D) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (DP1189248)
(E) RESTRICTION ON THE USE OF LAND (DP1189248)
(E6) EASEMENT FOR TRANSMISSION LINE 60 WIDE (P878332)
(E21) EASEMENT FOR BATTER 15 WIDE (DP...)
(E22) EASEMENT TO DRAIN WATER 5 WIDE (DP...)
(E23) EASEMENT FOR BATTER 15 WIDE (DP...)

Surveyor : Date of Survey : Surveyor's Ref :64246-STG3 (64246_STG3 REVE300415 dwg)	PLAN OF PROPOSED SUBDIVISION OF LOTS 810,809 IN DP1189248 & 831 IN DP1203104	LGA: CAMDEN Locality : GLEDSWOOD HILLS Subdivision No: Lengths are in metres. Reduction Ratio 1:2000	Registered DRAFT	DP 1203105

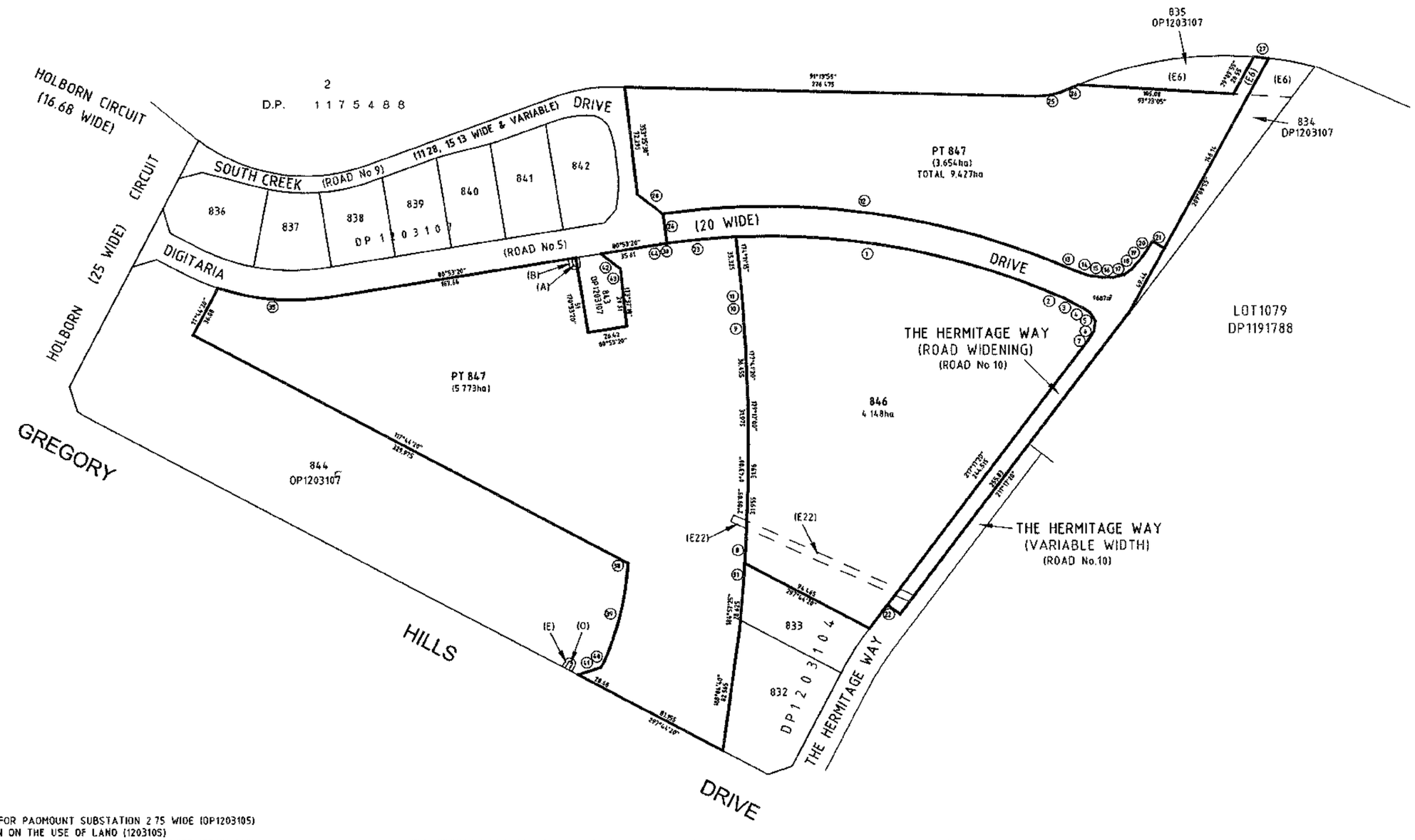
00 10 20 30 40 50 Table of mm 90 100 110 120 130 140

STAGE4-REVISION 12 - 20/08/15 **STAGE 4**
PLAN SUBJECT TO COUNCIL APPROVAL.
DIMENSIONS AND AREAS SUBJECT TO FINAL SURVEY

SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	CHORD	ARC	RADIUS	No.	BEARING	CHORD	ARC	RADIUS	No.	BEARING	CHORD	ARC	RADIUS
1	99°52'05"	210 79	212 45	4 90	13	112°15'59"	14 58			25	78°32'55"	21.96	22 14	50
2	102°15'59"	14 595			14	108°40'30"	9 26			26	66°46'00"	8 7	8 2	260
3	112°49'25"	13 245			15	98°28'50"	8 97			27	95°31'25"	10 845	10 845	260
4	122°12'00"	5.94			16	90°28'30"	7.615			28	307°23'05"	23.52		
5	146°43'20"	6.855			17	75°21'15"	7.545			29	32°39'00"	17.42		
6	7°00'40"	6.855			18	54°29'55"	6.285			30	81°44'15"	4.47	4.47	4 90
7	32°45'10"	7.06			19	69°00'15"	11 69			31	183°35'10"	16		
8	3°35'18"	15 965			20	93°06'40"	11 69			32	14°24'30"	87 35	88 405	210
9	176°28'10"	28 09			21	119°39'55"	9 2			33	359°54'35"	95 955	96 095	689 995
10	176°24'50"	7 365			22	307°19'20"	10 55			34	354°05'15"	10.62		
11	175°28'10"	9 315			23	264°42'10"	46 58	46 595	4 90	35	94°41'20"	75 375	76 11	158
12	97°08'35"	166 69	283 62	518	24	351°59'35"	28			36	173°37'00"	2 99		
										37	179°54'25"	93 14	93 595	593 315

No	BEARING	CHORD	ARC	RADIUS
38	4°28'55"	3 195		
39	194°00'50"	64.92	65.23	199 32
40	36°44'30"	4.085		
41	72°14'45"	16 09		
42	127°29'20"	16.49		
43	174°05'15"	9 785		
44	268°10'40"	5.1	5.1	4 98



(A) EASEMENT FOR PADMOUNT SUBSTATION 2 75 WIDE (DP1203105)
(B) RESTRICTION ON THE USE OF LAND (1203105)
(O) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (DP1189248)
(E) RESTRICTION ON THE USE OF LAND (DP1189248)
(E6) EASEMENT FOR TRANSMISSION LINE 60 WIDE (P878332)
(E22) EASEMENT TO DRAIN WATER S WIDE (DP)

(E21 & E23) EASEMENT FOR BATTER 15 WIDE (DP) TO BE RELEASED WITHIN ROAD DEDICATION & LOT 846

00 10 20 30 40 50 Table of mm 90 100 110 120 130 140

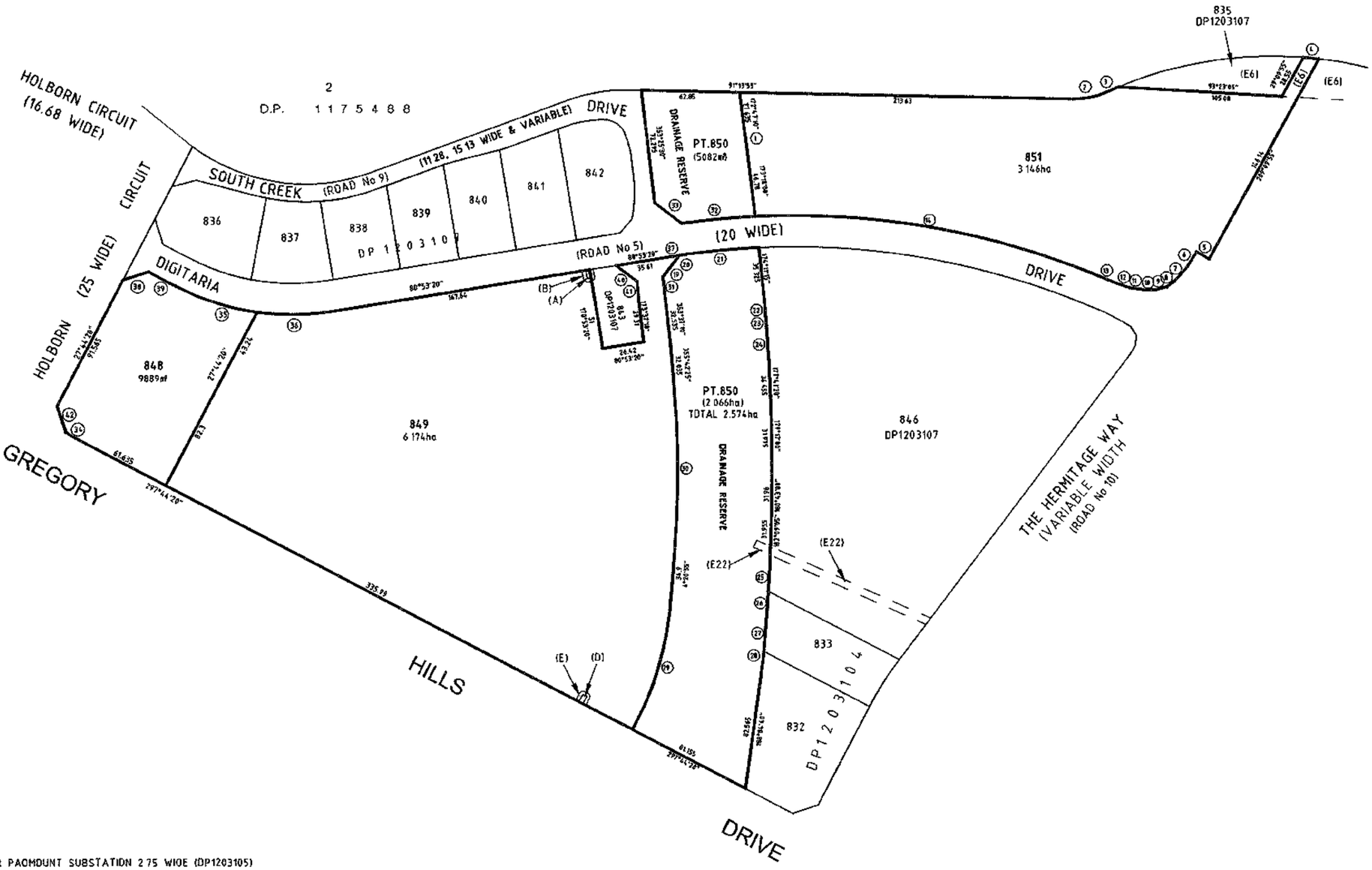
Surveyor : Date of Survey : Surveyor's Ref :64246-STG4 (64246_STG4 REVE 300415 dwg)	PLAN OF PROPOSED SUBDIVISION OF LOT 845 IN DP1203105	LGA: CAMDEN Locality : GLEDSWOOD HILLS Subdivision No: Lengths are in metres. Reduction Ratio 1: 2000	Registered DRAFT	DP 1203107

STAGE5-REVISION 12 - 20/08/15 STAGE 5
PLAN SUBJECT TO COUNCIL APPROVAL.
DIMENSIONS AND AREAS SUBJECT TO FINAL SURVEY

SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	CHORD	ARC	RADIUS	No	BEARING	CHORD	ARC	RADIUS	No	BEARING	CHORD	ARC	RADIUS
1	172°37'00"	5 3			12	288°40'30"	9 26			23	176°24'58"	7 365		
2	78°32'55"	21 96	22.14	50	13	292°15'58"	14 58			24	176°23'48"	20 09		
3	66°46'08"	8 2	8.2	260	14	279°48'48"	220.575	222.335	540	25	183°35'48"	15.965		
4	95°13'25"	18.045	18.065	260	15	94°41'20"	15.315	16.11	150	26	183°35'48"	16		
5	299°09'55"	9 2			16	27°44'28"	21.61			27	184°57'25"	22 605		
6	213°06'48"	10.69			17	173°37'18"	2.99			28	184°57'25"	6 02		
7	221°08'15"	11 69			18	179°56'25"	93 44	93 535	593 395	29	16°24'30"	87 75	88 485	230
8	234°19'55"	6 285			19	37°33'00"	17.42			30	359°54'35"	95 955	96 055	689.995
9	255°21'15"	7 545			20	81°46'15"	4 47	4.47	490	31	354°05'15"	10.62		
10	278°24'38"	7.615			21	84°43'18"	46 58	46.595	490	32	264°39'15"	47.27	47.285	510
11	278°24'58"	8 91			22	115°29'10"	9.315			33	30°23'05"	21.52		

No	Bearing	Chord	Arc	Radius
34	304°56'30"	18.65	18.655	95.25
35	107°54'28"	53 965	54 23	158
36	89°28'50"	47.21	47.385	156
37	263°58'40"	5 1	5 1	490
38	72°44'28"	16 99		
39	117°44'28"	19.025		
40	127°29'28"	16 49		
41	176°05'15"	9.755		
42	34°25'38"	17.665		



(A) EASEMENT FOR PADMOUNT SUBSTATION 2 75 WIDE (DP1203105)
(B) RESTRICTION ON THE USE OF LAND (1203105)
(D) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (DP1189248)
(E) RESTRICTION ON THE USE OF LAND (DP1189248)
(E6) EASEMENT FOR TRANSMISSION LINE 60 WIDE (P878332)
(E22) EASEMENT TO DRAIN WATER 5 WIDE (DP)

Surveyor : Date of Survey : Surveyor's Ref :64246-STG5 (64246_STG5 REVE 300415 dwg)	PLAN OF PROPOSED SUBDIVISION OF LOT 847 IN DP1203107 & LOT 844 IN DP1203105	LGA: CAMDEN Locality : GLEDSWOOD HILLS Subdivision No: Lengths are in metres. Reduction Ratio 1: 2000	Registered DRAFT	DP1203109

00 10 20 30 40 50 Table of mm 90 100 110 120 130 140

STAGE6-REVISION 13 - 21/08/15 **STAGE 6**
PLAN SUBJECT TO COUNCIL APPROVAL.
DIMENSIONS AND AREAS SUBJECT TO FINAL SURVEY

SCHEDULE of CURVED BOUNDARIES

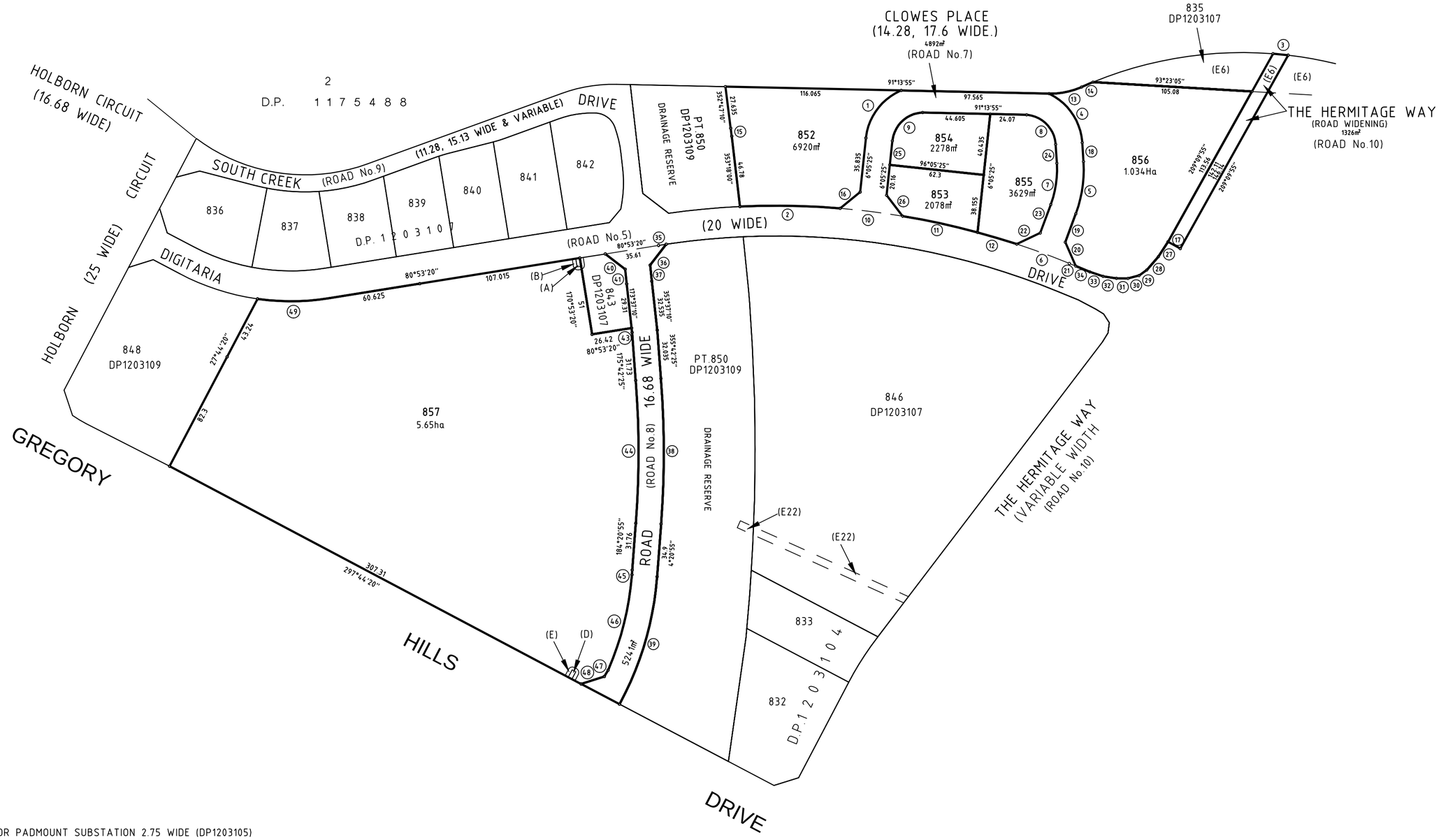
No	Bearing	Chord	Arc	Radius	No	Bearing	Chord	Arc	Radius
1	216°36'15"	39.095	41.01	38.5	8	315°33'50"	27.32	29.77	20.9
2	271°01'35"	66.105	66.15	510	9	226°54'00"	27.32	29.81	20.78
3	95°31'25"	10.045	10.045	260	10	277°04'45"	41.595	41.605	510
4	145°51'35"	39.095	41.01	38.5	11	282°15'35"	50.605	50.625	510
5	188°21'20"	34.835	35.09	83.895	12	286°37'10"	26.985	26.985	510
6	290°12'45"	36.96	36.965	510	13	78°32'55"	21.96	22.14	50
7	8°21'20"	27.525	27.73	66.295	14	66°46'00"	8.2	8.2	260

SCHEDULE of LINES

No	Bearing	Distance	No	Bearing	Distance	No	Bearing	Distance
15	352°37'00"	5.3	22	64°34'25"	17.195	29	234°29'55"	6.285
16	50°45'10"	17.07	23	20°20'15"	19.96	30	255°21'15"	7.545
17	299°09'55"	9.2	24	176°22'25"	12.53	31	270°26'30"	7.615
18	176°22'25"	12.53	25	6°05'25"	15.98	32	278°28'50"	8.97
19	20°20'15"	20	26	142°25'00"	17.36	33	288°40'30"	9.26
20	156°10'55"	17.22	27	213°06'40"	11.69	34	292°15'50"	9.945
21	292°15'50"	4.635	28	221°00'15"	11.69			

SCHEDULE of SHORT & CURVED BOUNDARIES

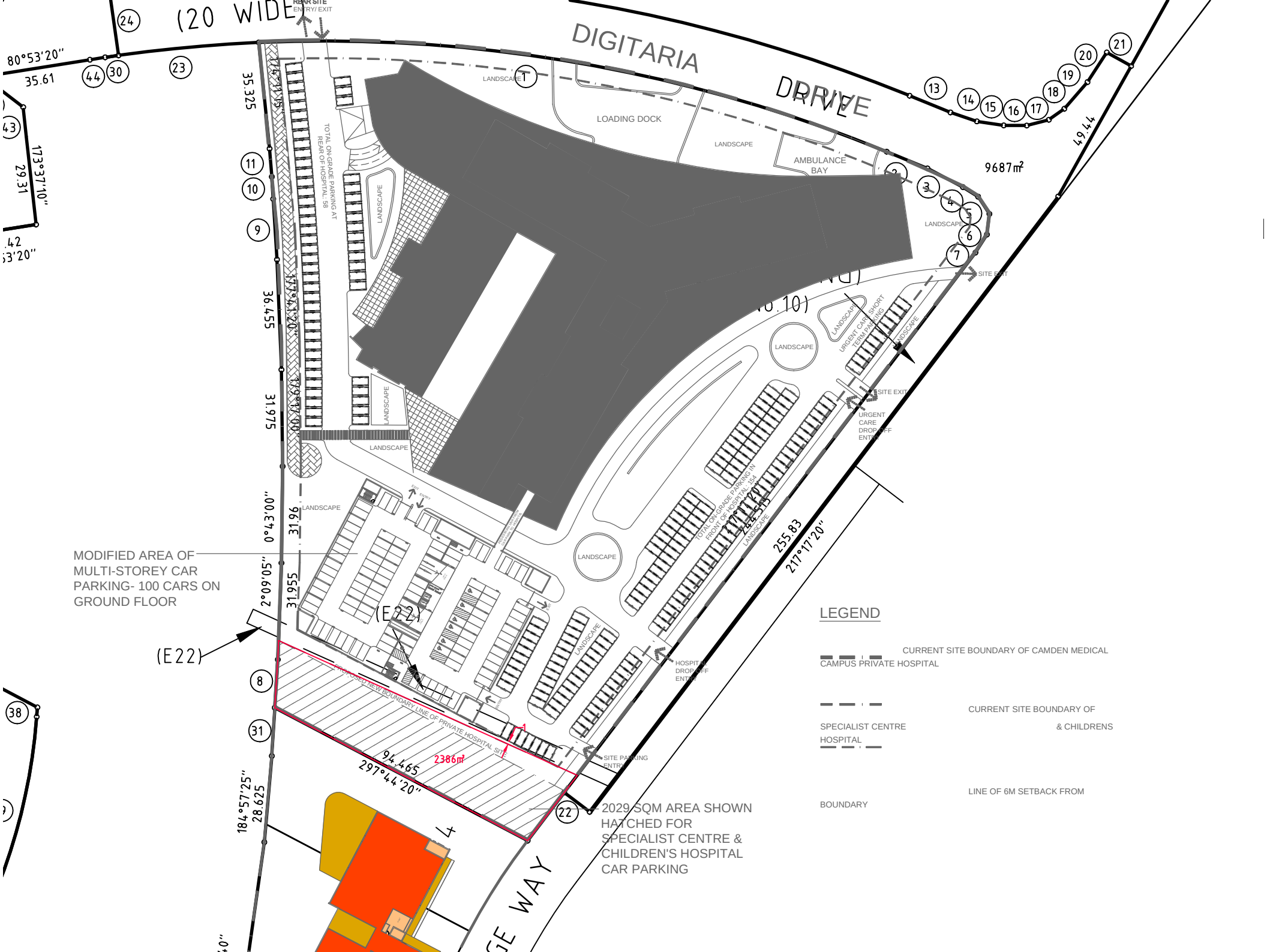
No	Bearing	Chord	Arc	Radius
35	261°10'40"	5.1	5.1	490
36	37°33'00"	17.42		
37	354°05'15"	10.62		
38	359°54'35"	95.955	96.055	609.995
39	16°24'30"	87.75	88.405	210
40	127°29'20"	16.49		
41	174°05'15"	9.755		
42	341°25'30"	17.605		
43	173°37'10"	2.99		
45	184°20'55"	3.135		
47	210°44'30"	4.885		
48	252°14'45"	16.09		
49	89°28'50"	47.21	47.385	158
44	179°54'25"	93.44	93.535	593.355
46	194°00'50"	64.92	65.23	193.32



(A) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (DP1203105)
(B) RESTRICTION ON THE USE OF LAND (1203105)
(D) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (DP1189248)
(E) RESTRICTION ON THE USE OF LAND (DP1189248)
(E6) EASEMENT FOR TRANSMISSION LINE 60 WIDE (P878332)
(E22) EASEMENT TO DRAIN WATER 5 WIDE (DP...)

Surveyor : Date of Survey : Surveyor's Ref :64246-STG6 (64246_STG6 REVF 110815)	PLAN OF PROPOSED SUBDIVISION OF LOT 849 & 851 IN DP1203109	LGA: CAMDEN Locality : GLEDSWOOD HILLS Subdivision No: Lengths are in metres. Reduction Ratio 1:2000	Registered DRAFT	DP 1203110

00 | 10 | 20 | 30 | 40 | 50 | Table of mm | 90 | 100 | 110 | 120 | 130 | 140


DIGITARIA DRIVE
(20 WIDE)
REAR SITE ENTRY/ EXIT
LOADING DOCK
LANDSCAPE
AMBULANCE BAY
9687m²
TOTAL ON-GRADE PARKING AT REAR OF HOSPITAL: 58
SITE EXIT
URGENT CARE SHORT TERM PARKING
URGENT CARE DROP-OFF ENTRY
TOTAL ON-GRADE PARKING IN FRONT OF HOSPITAL: 154
HOSPITAL DROP-OFF ENTRY
SITE PARKING ENTRY
PROPOSED NEW BOUNDARY LINE OF PRIVATE HOSPITAL SITE
2386m²
94.465
297°44'20"
255.83
217°17'20"
80°53'20"
35.61
173°37'10"
29.31
35.325
36.455
31.975
31.96
31.955
0°43'00"
2°09'05"
184°57'25"
28.625
49.44
MODIFIED AREA OF MULTI-STOREY CAR PARKING- 100 CARS ON GROUND FLOOR
(E22)
2029 SQM AREA SHOWN HATCHED FOR SPECIALIST CENTRE & CHILDREN'S HOSPITAL CAR PARKING
LEGEND
CURRENT SITE BOUNDARY OF CAMDEN MEDICAL CAMPUS PRIVATE HOSPITAL
CURRENT SITE BOUNDARY OF SPECIALIST CENTRE & CHILDRENS HOSPITAL
LINE OF 6M SETBACK FROM BOUNDARY

APPENDIX VII – DIAL BEFORE YOU DIG

Job No 10480460

Phone: 1100
www.1100.com.au

Caller Details

Contact: Mr Matthew Toole
Company: A.D. Envirotech
Address: Unit 6 7 Millennium Court
Silverwater NSW 2128

Caller Id: 1195445 **Phone:** 0296486669
Mobile: 0410389018 **Fax:** Not Supplied
Email: m.toole@adenvirotech.com.au

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: 10535
Working on Behalf of:
Private

Enquiry Date:	Start Date:	End Date:
29/03/2016	01/04/2016	05/04/2016

Address:
Gregory Hills Drive
Catherine Field NSW 2557

Job Purpose: Excavation
Onsite Activity: Vertical Boring
Location of Workplace: Private Property
Location in Road: Not Supplied

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you 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
51811258	Endeavour Energy	0298534161	NOTIFIED
51811260	Jemena Gas West	1300880906	NOTIFIED
51811261	Sydney Water	132092	NOTIFIED
51811259	Telstra NSW, Central	1800653935	NOTIFIED

END OF UTILITIES LIST

If further clarification is required, please contact:
Endeavour Energy
Phone: (02) 9853 4161 (8:00am-4:30pm Mon-Fri)
Emergency Phone Number: 131 003

DBYD Underground Search Report

Date: 29/03/2016

DBYD Sequence No: 51811258 **DBYD Job No:** 10480460

ENDEAVOUR ENERGY ASSETS AFFECTED

To:	Mr Matthew Toole		Company:	A.D. Envirotech	
Address:	Unit 6 7 Millennium Court, Silverwater, NSW 2128				
Cust. ID:	1195445	Email:	m.toole@adenvirotech.com.au		
Phone:	0296486669	Mobile:	0410389018	Fax:	Not Supplied
Enquiry Location:	Gregory Hills Drive, Catherine Field, NSW 2557				

Our Search has shown that **UNDERGROUND ASSETS ARE PRESENT** on our plans within the nominated enquiry location. This search is based on the graphical position of the excavation site as denoted in the DBYD customer confirmation sheet.

WARNING

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- The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
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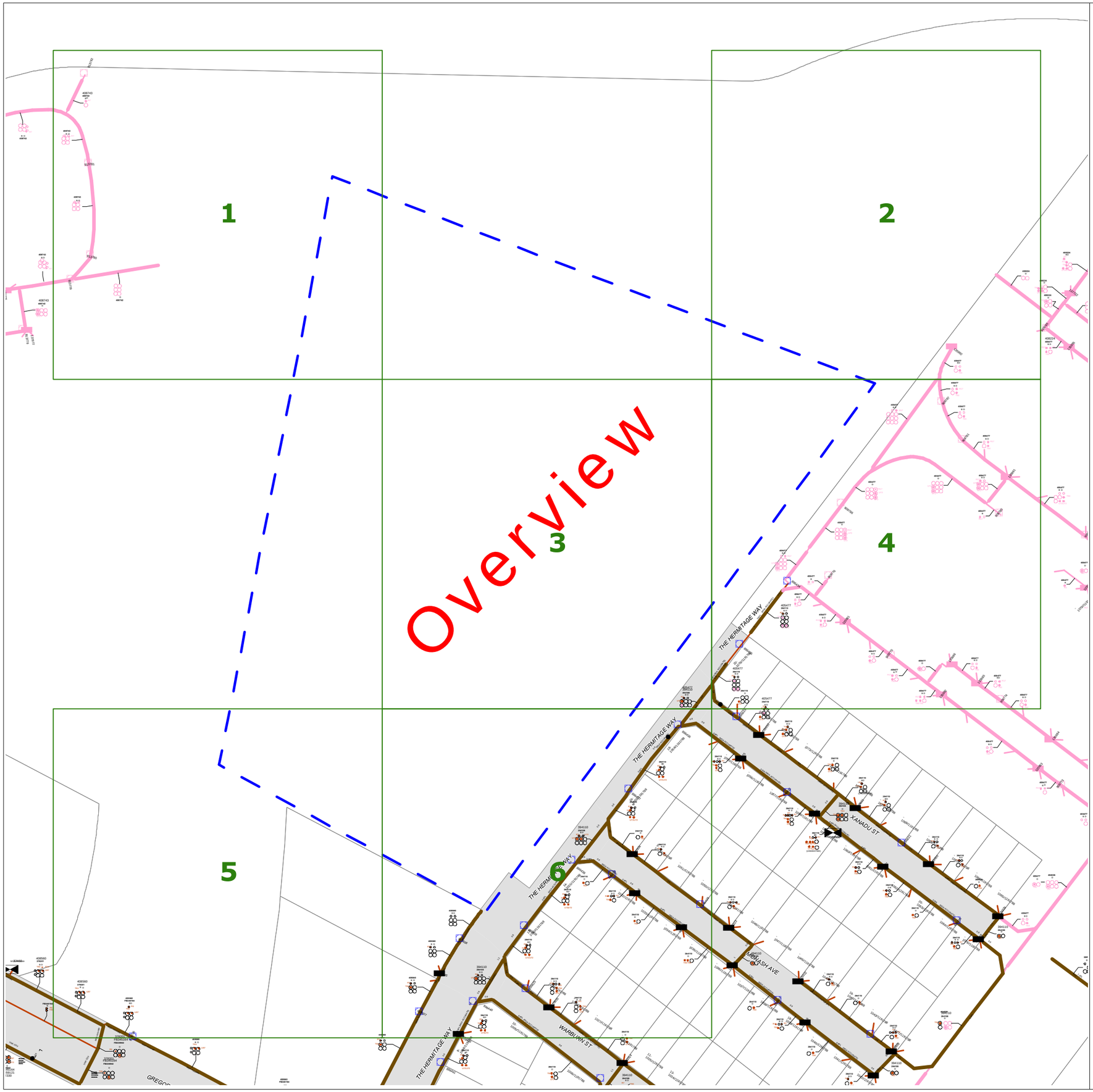
- Endeavour Energy plans **do not** show any underground customer service mains or information relating to service mains within private property.
- Asbestos or asbestos-containing material may be present on or near Endeavour Energy's underground assets.
- Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.
- All plans must be printed and made available at the worksite where excavation is to be undertaken. Plans must be reviewed and understood by the crew on site prior to commencing excavation.

SUPPLEMENTARY MATERIAL

Material	Purpose	Location
DBYD Cover Letter	Endeavour Energy DBYD response Cover Letter	Attached
DBYD Important Information & Disclaimer	Endeavour Energy disclaimer, responsibilities and information on understanding plans	Attached
DBYD Response Plans	Endeavour Energy DBYD plans	Attached
Work Cover NSW *"Work near underground assets: Guide"*	Guideline for anyone involved in construction work near underground assets	Contact Work Cover NSW for a copy
Work Cover NSW *"Excavation work: Code of practice"*	Practical guidance on managing health and safety risks associated with excavation	URL [Click Here]
Safe Work Australia *"Working in the vicinity of overhead and underground electric lines guidance material"*	Provides information on how to manage risks when working in the vicinity of overhead and underground electric lines at a workplace	URL [Click Here]
Endeavour Energy Safety Brochures & Guides	To raise awareness of dangers of working on or near Endeavour Energy's assets	URL [Click Here]



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DISCLAIMER

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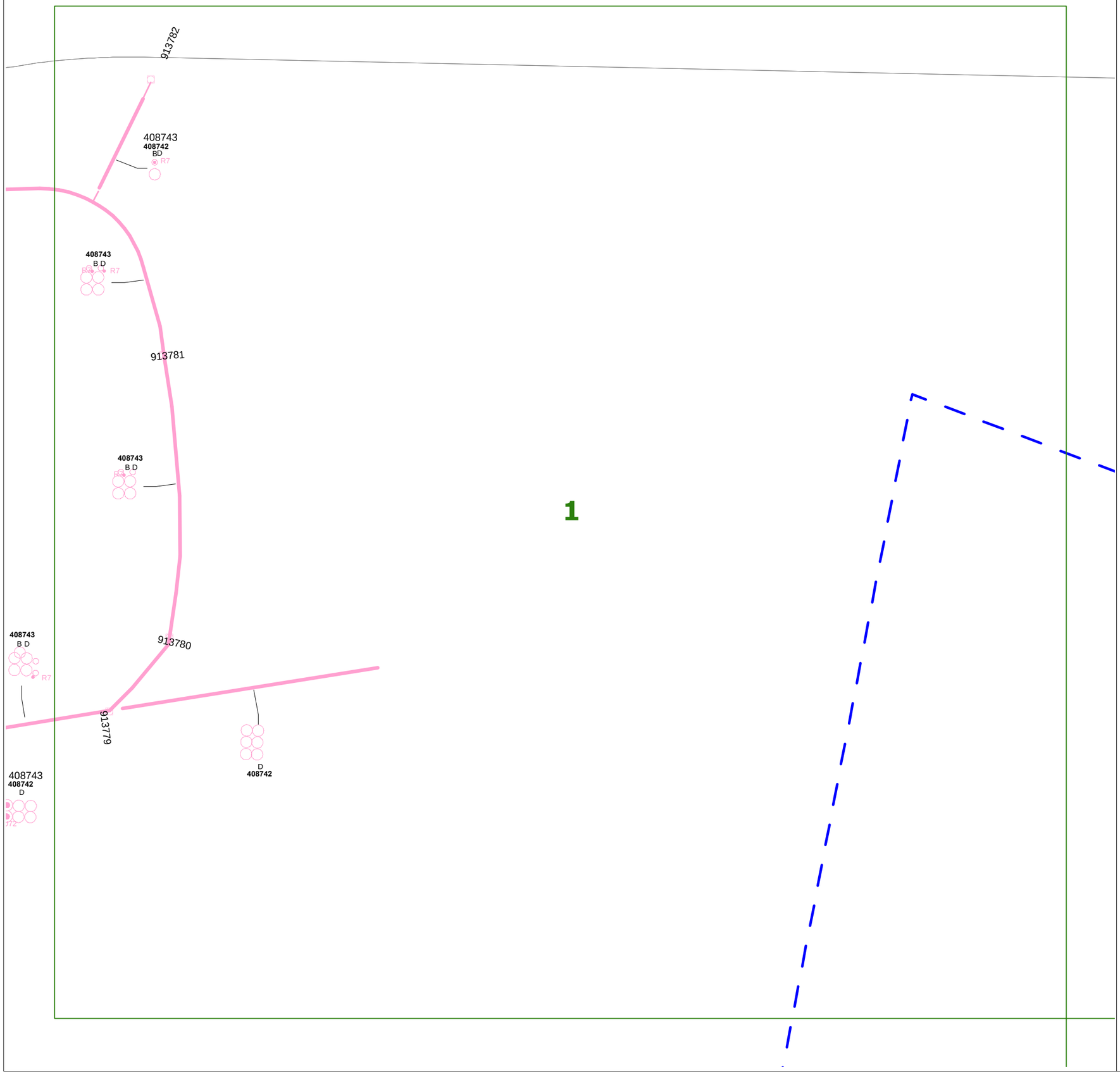
LEGEND

- Street light column (or)
- Padmount substation
- Overground pillar (O.G.Box) (or)
- Underground pit
- Duct run
- Cable run
- Typical duct section
- Asbestos warning

N

NOT TO SCALE

DBYD Sequence No.:	51811258
Issued Date:	29/03/2016



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- Underground pit
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- Cable run
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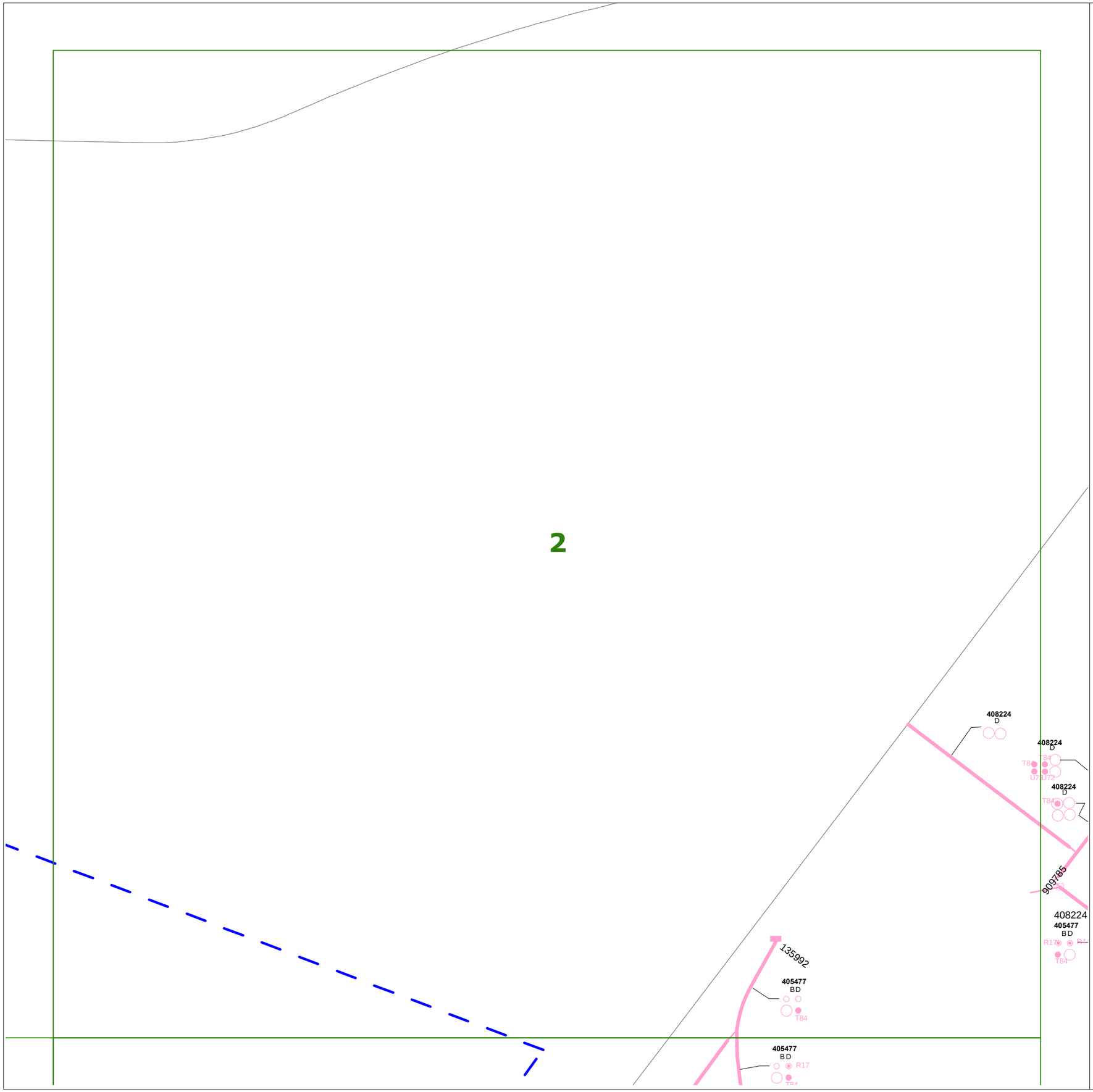

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- Padmount substation
- Overground pillar (O.G.Box) (or)
- Underground pit
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- Cable run
- Typical duct section
- Asbestos warning

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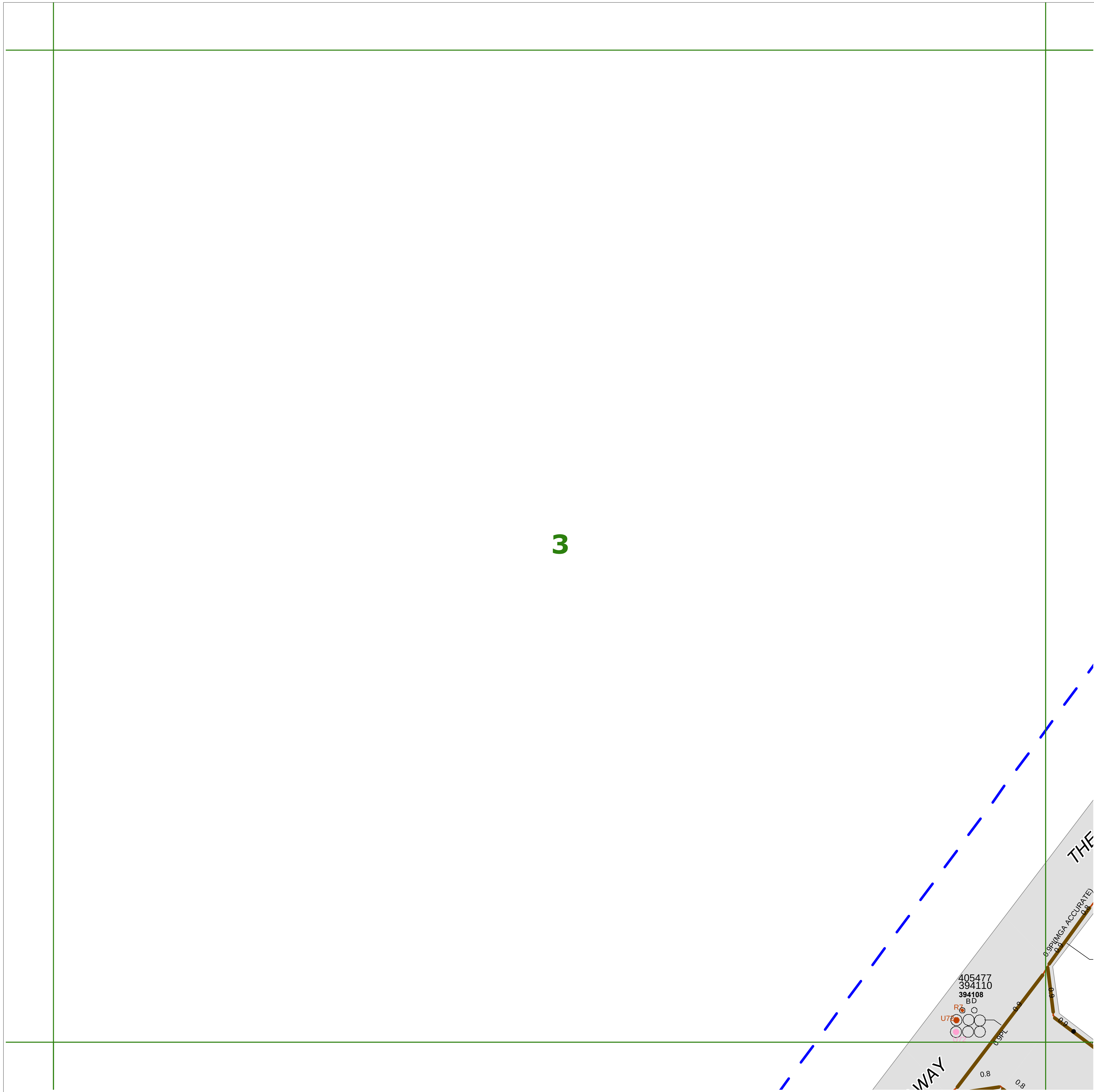

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LEGEND

or Street light column

Padmount substation

or Overground pillar (O.G.Box)

Underground pit

Duct run

Cable run

Typical duct section

Asbestos warning

N

NOT TO SCALE

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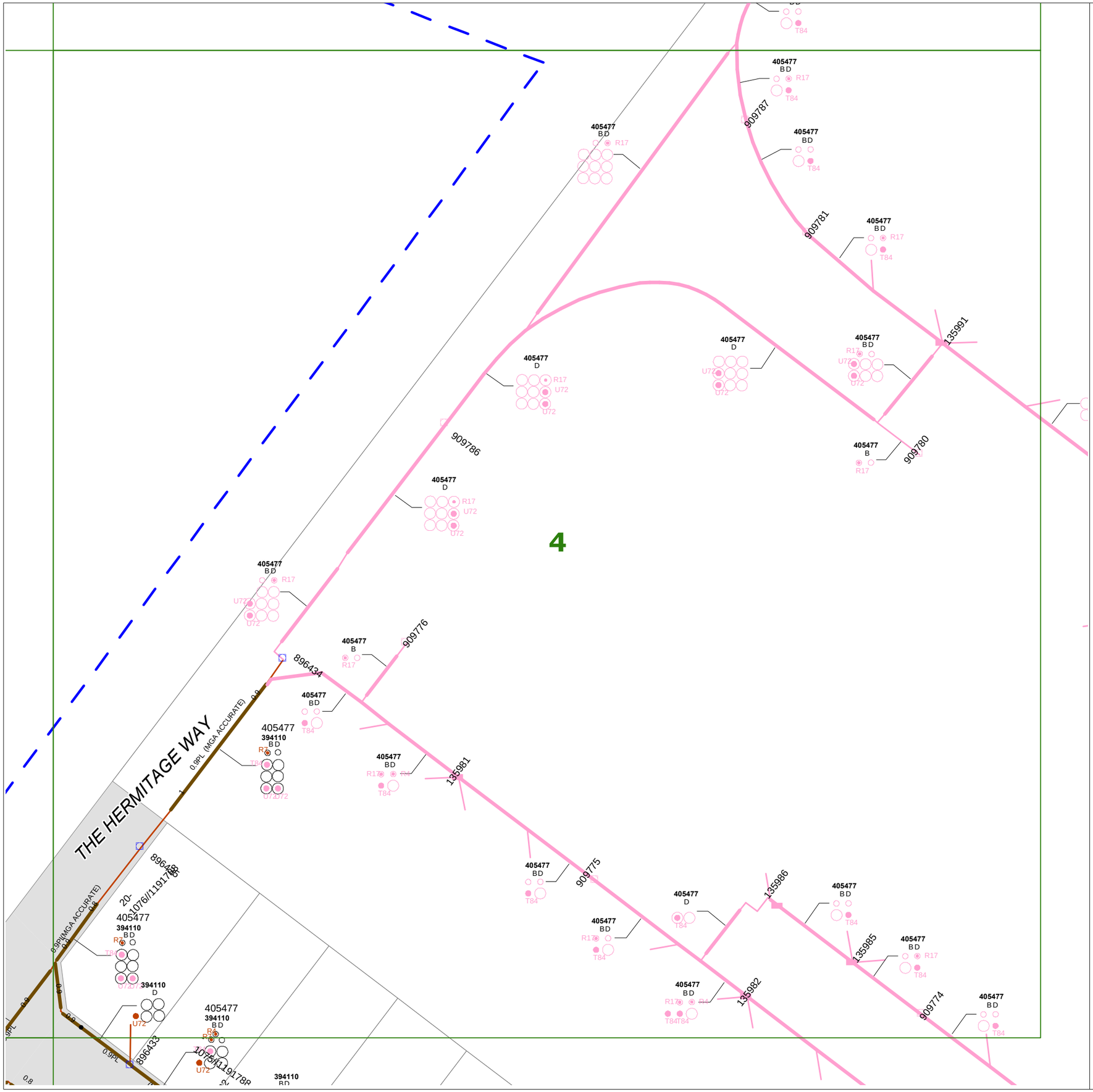

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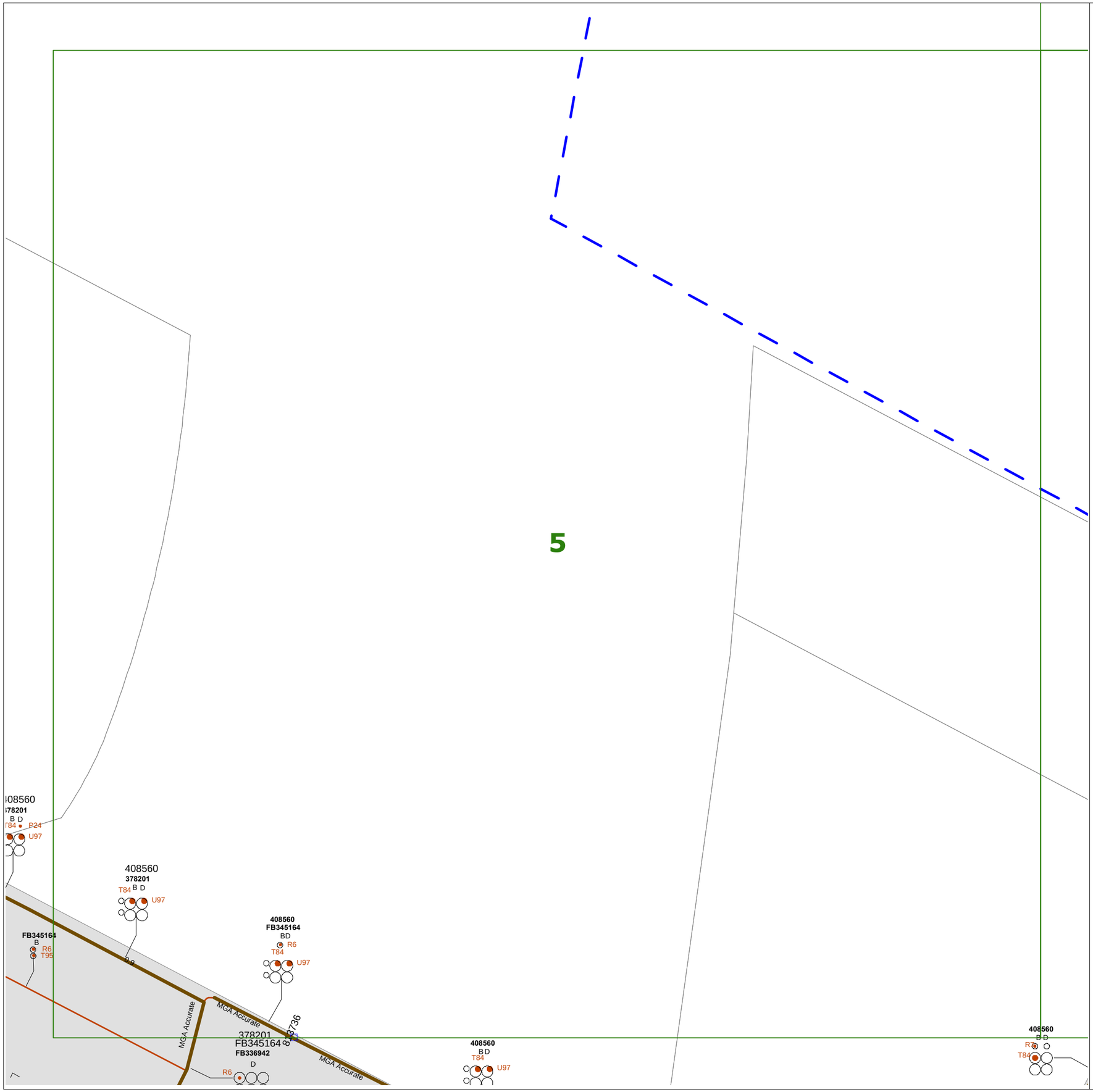

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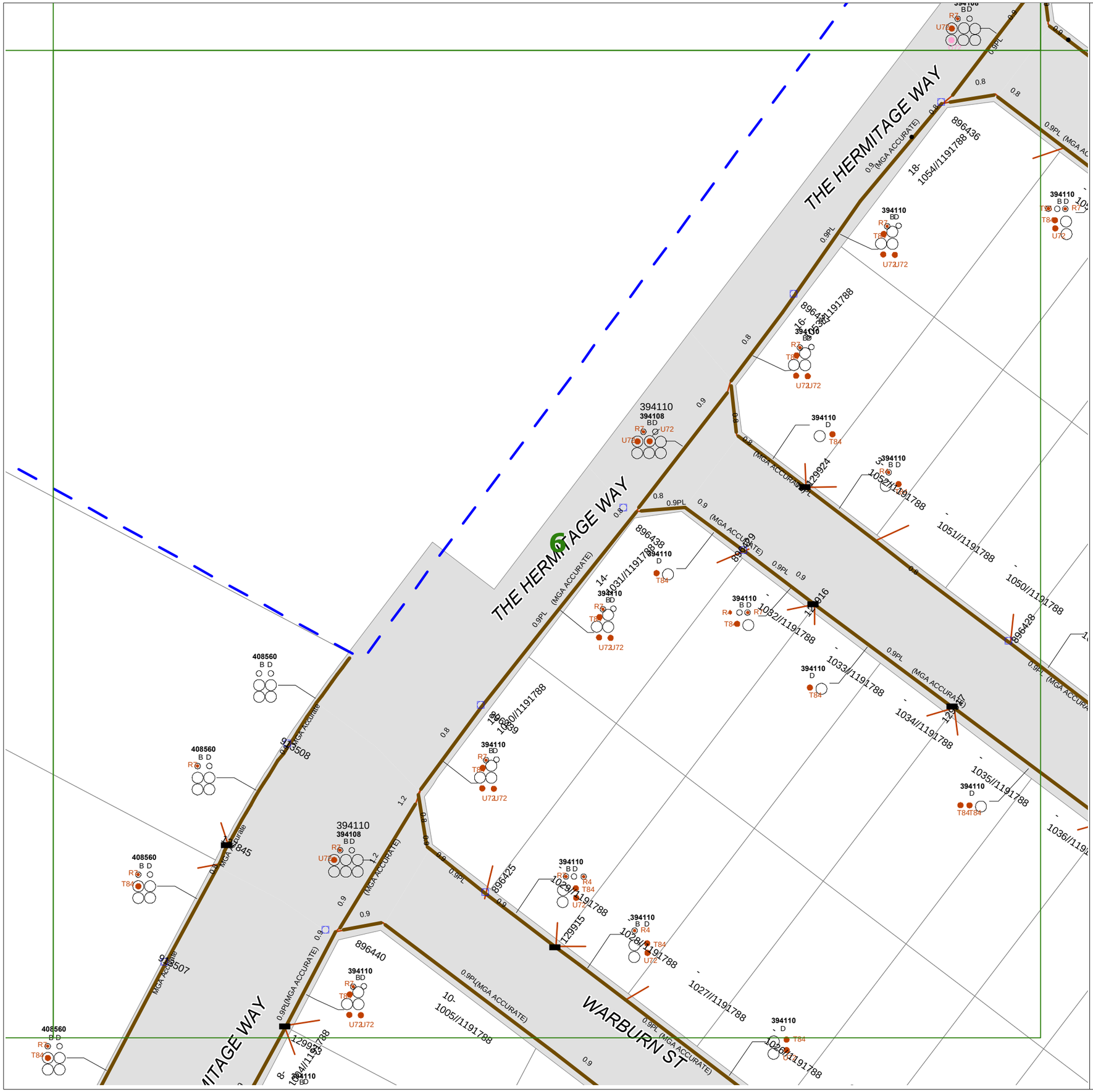
DBYD Sequence No.:	51811258
Issued Date:	29/03/2016



WARNING

- **All electrical apparatus shall be regarded as live until proved de-energised.** Contact with live electrical apparatus will cause severe injury or death.
- In accordance with the *Electricity Supply Act 1995*, you are obliged to report any damage to Endeavour Energy Assets immediately by calling **131 003**.
- The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
- The customer must contact Endeavour Energy if any of the plans provided have blank pages, as some underground asset information may be incomplete.
- Endeavour Energy underground earth grids may exist and their location **may not** be shown on plans. Persons excavating are expected to exercise all due care, especially in the vicinity of padmount substations, pole mounted substations, pole mounted switches, transmission poles and towers.
- Endeavour Energy plans **do not** show any underground customer service mains or information relating to service mains within private property.
- Asbestos or asbestos-containing material may be present on or near Endeavour Energy's underground assets.
- Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.
- All plans must be printed and made available at the worksite where excavation is to be undertaken. Plans must be reviewed and understood by the crew on site prior to commencing excavation.

INFORMATION PROVIDED BY ENDEAVOUR ENERGY

- Any plans provided pursuant to this service are intended to show the approximate location of underground assets relative to road boundaries, property fences and other structures at the time of installation.
- Depth of underground assets may vary significantly from information provided on plans as a result of changes to road, footpath or surface levels subsequent to installation.
- Such plans have been prepared solely for use by Endeavour Energy staff for design, construction and maintenance purposes.
- All enquiry details and results are kept in a register.

DISCLAIMER

Whilst Endeavour Energy has taken all reasonable steps to ensure that the information contained in the plans is as accurate as possible it will accept no liability for inaccuracies in the information shown on such plans.

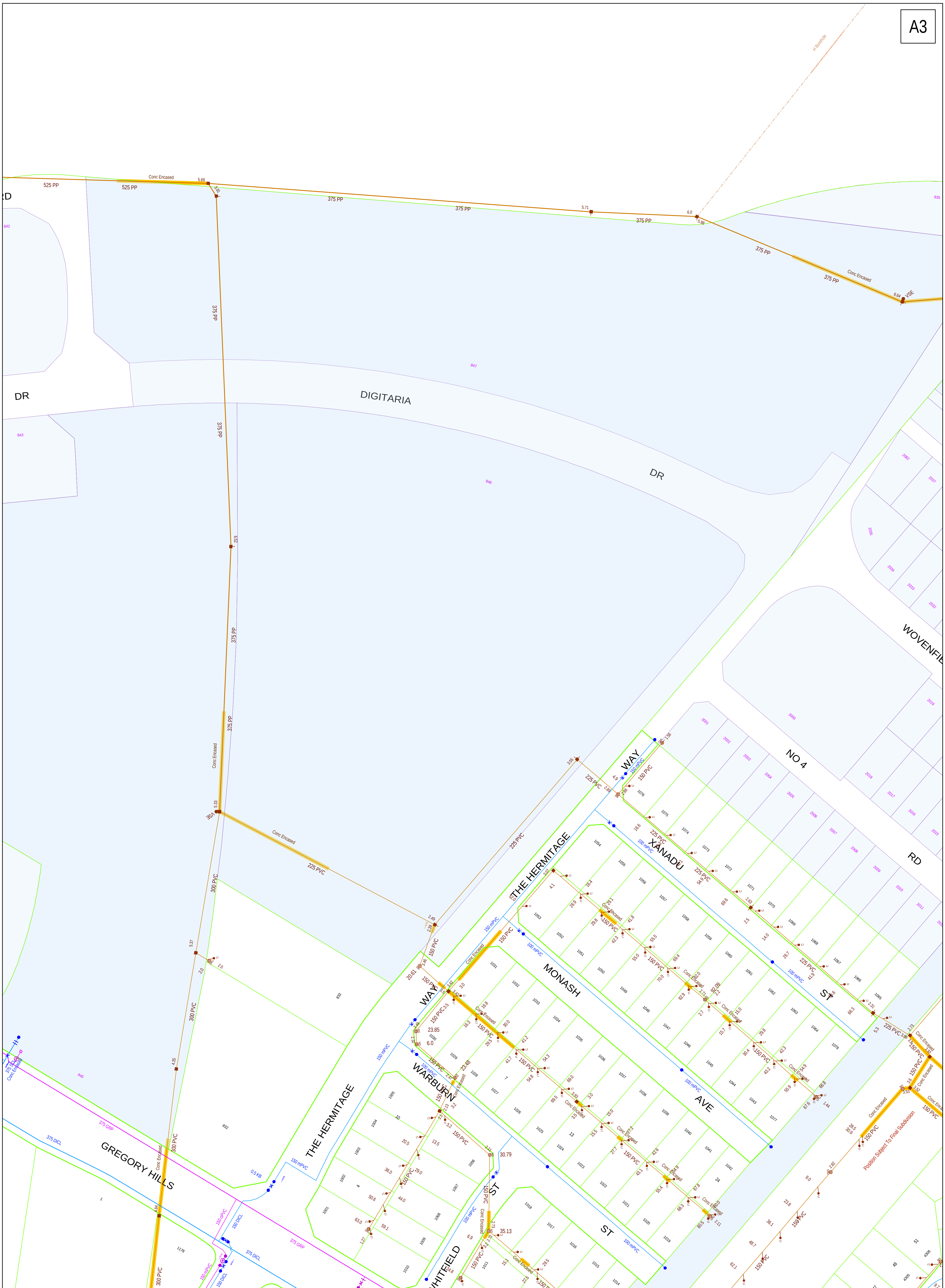
LEGEND

- Street light column (or)
- Padmount substation
- Overground pillar (O.G.Box) (or)
- Underground pit
- Duct run
- Cable run
- Typical duct section
- Asbestos warning

N

NOT TO SCALE

DBYD Sequence No.:	51811258
Issued Date:	29/03/2016



DBYD Address:
n/a Gregory Hills Drive
Catherine Field NSW 2557

DBYD Job No: 10480460

DBYD Sequence No: 51811261

SYDNEY WATER CORPORATION

Scale: 1:1500

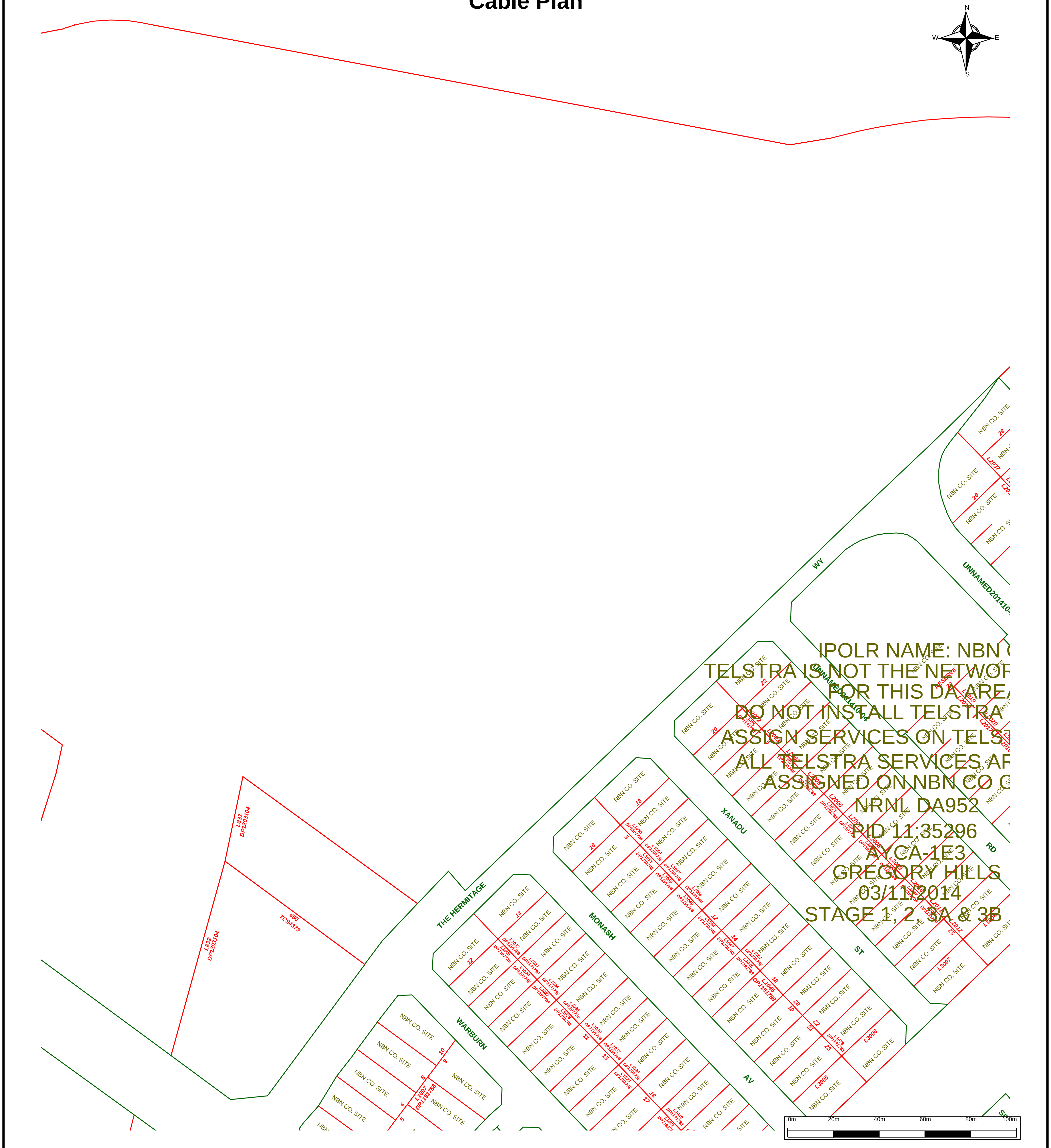
Date of Production: 29/03/2016

Plan 1 of 1

N

0m 7m 14m 21m 28m

Cable Plan



Telstra	For all Telstra DBYD plan enquiries - email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)	Sequence Number: 51811259
TELSTRA CORPORATION LIMITED A.C.N. 051 775 556		Please read Duty of Care prior to any excavating
Generated On 29/03/2016 12:53:49		

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

APPENDIX VIII – ANALYTICAL REPORTS

Environmental and OH&S Laboratory

A division of A. D. Envirotech Australia Pty Ltd A.C.N. 093 452 950

Unit 4/10-11 Millennium Court,
Silverwater 2128
Ph: (02) 9648-6669

Analysis report: STC-76-10354

Customer: A. D. Envirotech Australia Pty. Ltd.
Attention: Matthew Toole

Sample Log In Details

Your reference: STC-76-10354
No. of Samples: 84
Date Received: 06.04.2016
Date completed instructions received: 06.04.2016
Date of analysis: 06-19.04.2016

Report Details

Report Date: 21.04.2016
Method number:** ESA-MP-01
ESA-MP-02
ESA-P-ORG03
ESA-P-ORG07
ESA-P-ORG08
ESA-P-ORG09
ESA-P-ORG14
ESA-P-ORG15
AS 1289.2.1.1
AS 1289.4.3.1

Results Authorised By:

Dr Dominika Wojtalewicz (MRACI CCHEM)
Quality System Manager/Chemist

Accreditation No.14664.

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Tests not covered by NATA are denoted with *.

Lab ID	PQL (mg/kg)	10354-C1	10354-C2	10354-C3	10354-C4	10354-C5	10354-C6
Sample Name		10354-BH01.A	10354-BH01.E	10354-BH02.C	10354-BH02.E	10354-BH03.A	10354-BH03.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.4
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	2.0
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	2.4
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	2.8
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.7
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.0
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	2.0
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	0.3	<0.3	<0.3	4.8
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.4
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.4
Pyrene	0.3	<0.3	<0.3	0.3	<0.3	<0.3	4.8
p-Terphenyl-d14	surr.	108%	107%	107%	106%	109%	109%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	110%	111%	108%	110%	112%	108%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	95%	99%	97%	97%	98%	98%

Lab ID	PQL (mg/kg)	10354-C1	10354-C2	10354-C3	10354-C4	10354-C5	10354-C6
Sample Name		10354-BH01.A	10354-BH01.E	10354-BH02.C	10354-BH02.E	10354-BH03.A	10354-BH03.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	116%	122%	105%	122%	127%	117%
Metals							
Arsenic	2	19	18	21	15	18	17
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	19	16	14	14	15	20
Copper	5	34	33	45	22	22	25
Lead	10	28	29	45	19	20	32
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	21	16	29	14	<10	<10
Zinc	5	66	58	91	41	30	50
Moisture	%	14%	20%	14%	15%	19%	24%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C7	10354-C8	10354-C9	10354-C10	10354-C11	10354-C12
Sample Name		10354-BH04.A	10354-BH04.E	10354-BH05.C	10354-BH05.E	10354-BH06.A	10354-BH06.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	0.8	0.5	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	0.8	0.5	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	108%	108%	107%	105%	107%	104%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	111%	111%	109%	107%	111%	107%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	99%	101%	101%	98%	100%	100%

Lab ID	PQL (mg/kg)	10354-C7	10354-C8	10354-C9	10354-C10	10354-C11	10354-C12
Sample Name		10354-BH04.A	10354-BH04.E	10354-BH05.C	10354-BH05.E	10354-BH06.A	10354-BH06.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	113%	121%	117%	110%	122%	121%
Metals							
Arsenic	2	12	16	18	15	20	35
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	9.4	12	6.7	24	11	12
Copper	5	5.9	25	29	46	34	72
Lead	10	22	24	19	32	24	42
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	12	<10	36	<10	<10
Zinc	5	30	50	30	66	51	52
Moisture	%	15%	16%	10%	11%	11%	16%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C13	10354-C14	10354-C15	10354-C16	10354-C17	10354-C18
Sample Name		10354-BH07.A	10354-BH07.C	10354-BH08.A	10354-BH08.C	10354-BH09.A	10354-BH09.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	106%	104%	110%	110%	111%	111%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	107%	108%	112%	111%	114%	115%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	97%	99%	100%	101%	105%	103%

Lab ID	PQL (mg/kg)	10354-C13	10354-C14	10354-C15	10354-C16	10354-C17	10354-C18
Sample Name		10354-BH07.A	10354-BH07.C	10354-BH08.A	10354-BH08.C	10354-BH09.A	10354-BH09.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	114%	113%	113%	112%	110%	114%
Metals							
Arsenic	2	18	15	17	16	17	17
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	13	8.4	9.4	13	14	30
Copper	5	53	45	31	22	32	18
Lead	10	41	31	29	17	25	20
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	48	27	13	12	14	11
Zinc	5	110	81	49	47	56	39
Moisture	%	10%	17%	15%	18%	21%	26%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C19	10354-C20	10354-C21	10354-C22	10354-C23	10354-C24
Sample Name		10354-BH10.A	10354-BH10.C	10354-BH11.A	10354-BH11.C	10354-BH12.A	10354-BH12.E
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	0.5	<0.3	<0.3	<0.3	<0.3	0.4
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	0.5	<0.3	<0.3	<0.3	<0.3	0.4
p-Terphenyl-d14	surr.	111%	108%	103%	106%	106%	107%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	114%	114%	105%	111%	108%	109%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	100%	107%	94%	100%	98%	97%

Lab ID	PQL (mg/kg)	10354-C19	10354-C20	10354-C21	10354-C22	10354-C23	10354-C24
Sample Name		10354-BH10.A	10354-BH10.C	10354-BH11.A	10354-BH11.C	10354-BH12.A	10354-BH12.E
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	111%	108%	119%	111%	120%	110%
Metals							
Arsenic	2	5.4	5.6	9.5	7.2	9.5	15
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	<5	12	16	14	13	21
Copper	5	5.9	24	33	25	36	110
Lead	10	15	12	29	11	23	55
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	20	<10	22	35
Zinc	5	36	34	61	34	72	75
Moisture	%	16%	25%	11%	20%	17%	11%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C25	10354-C26	10354-C27	10354-C28	10354-C29	10354-C30
Sample Name		10354-BH13.C	10354-BH13.E	10354-BH14.A	10354-BH14.C	10354-BH15.A	10354-BH15.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	0.3	<0.3	<0.3	<0.3	<0.3	0.4
Benzo[b]fluoranthene	0.3	0.5	<0.3	<0.3	<0.3	<0.3	0.5
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	1.2	0.3	<0.3	<0.3	<0.3	0.4
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	1.2	0.3	<0.3	<0.3	<0.3	0.4
p-Terphenyl-d14	surr.	106%	105%	105%	108%	107%	106%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	106%	107%	108%	110%	109%	106%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	94%	95%	96%	102%	101%	92%

Lab ID	PQL (mg/kg)	10354-C25	10354-C26	10354-C27	10354-C28	10354-C29	10354-C30
Sample Name		10354-BH13.C	10354-BH13.E	10354-BH14.A	10354-BH14.C	10354-BH15.A	10354-BH15.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	118%	117%	120%	120%	124%	120%
Metals							
Arsenic	2	13	17	11	13	8.1	13
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	18	23	21	17	18	21
Copper	5	25	62	36	32	32	39
Lead	10	26	52	30	23	<10	37
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	13	27	17	23	11	15
Zinc	5	43	79	64	79	53	69
Moisture	%	14%	16%	16%	17%	26%	19%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C31	10354-C32	10354-C33	10354-C34	10354-C35	10354-C36
Sample Name		10354-BH16.A	10354-BH16.C	10354-BH17.A	10354-BH18.A	10354-BH19.A	10354-BH19.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	108%	107%	109%	111%	108%	107%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	108%	110%	111%	114%	109%	110%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	95%	97%	106%	102%	103%	100%

Lab ID	PQL (mg/kg)	10354-C31	10354-C32	10354-C33	10354-C34	10354-C35	10354-C36
Sample Name		10354-BH16.A	10354-BH16.C	10354-BH17.A	10354-BH18.A	10354-BH19.A	10354-BH19.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	114%	120%	118%	123%	122%	117%
Metals							
Arsenic	2	12	13	11	13	16	13
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	25	23	23	13	11	18
Copper	5	58	26	16	10	17	34
Lead	10	200	15	22	<10	<10	<10
Mercury	0.2	0.5	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	14	17	<10	<10	<10	17
Zinc	5	88	50	27	10	24	77
Moisture	%	16%	19%	18%	22%	21%	12%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C37	10354-C38	10354-C39	10354-C40	10354-C41	10354-C42
Sample Name		10354-BH20.A	10354-BH20.C	10354-BH21.A	10354-BH21.C	10354-BH22.A	10354-BH22.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	107%	107%	109%	109%	88%	85%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	111%	110%	109%	109%	102%	101%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	99%	100%	102%	100%	103%	104%

Lab ID	PQL (mg/kg)	10354-C37	10354-C38	10354-C39	10354-C40	10354-C41	10354-C42
Sample Name		10354-BH20.A	10354-BH20.C	10354-BH21.A	10354-BH21.C	10354-BH22.A	10354-BH22.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	118%	119%	115%	113%	121%	124%
Metals							
Arsenic	2	11	9.3	9.7	12	16	11
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	18	15	10	24	21	18
Copper	5	16	17	22	13	23	16
Lead	10	18	46	19	18	11	15
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	10	<10	<10	<10
Zinc	5	32	41	38	18	41	45
Moisture	%	19%	19%	12%	16%	17%	18%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C43	10354-C44	10354-C45	10354-C46	10354-C47	10354-C48
Sample Name		10354-BH23.A	10354-BH23.C	10354-BH24.A	10354-BH24.C	10354-BH25.A	10354-BH25.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	90%	90%	90%	94%	94%	100%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	101%	104%	101%	98%	96%	103%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	105%	103%	104%	105%	105%	106%

Lab ID	PQL (mg/kg)	10354-C43	10354-C44	10354-C45	10354-C46	10354-C47	10354-C48
Sample Name		10354-BH23.A	10354-BH23.C	10354-BH24.A	10354-BH24.C	10354-BH25.A	10354-BH25.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	260	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	119%	113%	118%	125%	117%	117%
Metals							
Arsenic	2	15	<2	4.9	3.7	<2	6.5
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	16	21	15	34	19	28
Copper	5	36	17	32	27	23	30
Lead	10	41	25	50	37	55	69
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	18	11	16	21	13	14
Zinc	5	81	32	61	55	43	48
Moisture	%	12%	20%	13%	29%	12%	20%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	5.9

Lab ID	PQL (mg/kg)	10354-C49	10354-C50	10354-C51	10354-C52	10354-C53	10354-C54
Sample Name		10354-BH26.A	10354-BH26.C	10354-BH27.A	10354-BH27.C	10354-BH28.A	10354-BH28.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	93%	94%	98%	96%	100%	95%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	96%	98%	100%	97%	100%	99%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	101%	103%	106%	102%	102%	102%

Lab ID	PQL (mg/kg)	10354-C49	10354-C50	10354-C51	10354-C52	10354-C53	10354-C54
Sample Name		10354-BH26.A	10354-BH26.C	10354-BH27.A	10354-BH27.C	10354-BH28.A	10354-BH28.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	116%	120%	121%	128%	122%	121%
Metals							
Arsenic	2	8.5	10	7.5	4.6	2.3	5.1
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	25	27	38	17	13	14
Copper	5	21	29	28	21	18	19
Lead	10	44	15	20	<10	<10	<10
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	17	22	18	10	<10	<10
Zinc	5	60	60	54	46	32	35
Moisture	%	23%	21%	18%	22%	22%	22%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C55	10354-C56	10354-C57	10354-C58	10354-C59	10354-C60
Sample Name		10354-BH29.A	10354-BH30.A	10354-BH31.A	10354-BH31.C	10354-BH32.A	10354-BH33.A
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	88%	101%	93%	93%	98%	97%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	96%	98%	99%	96%	100%	99%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	102%	104%	102%	99%	101%	103%

Lab ID	PQL (mg/kg)	10354-C55	10354-C56	10354-C57	10354-C58	10354-C59	10354-C60
Sample Name		10354-BH29.A	10354-BH30.A	10354-BH31.A	10354-BH31.C	10354-BH32.A	10354-BH33.A
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	119%	117%	118%	124%	122%	121%
Metals							
Arsenic	2	6.7	14	8.0	7.9	6.3	11
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	19	20	22	10	20	12
Copper	5	25	28	22	24	31	18
Lead	10	10	12	12	<10	<10	<10
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	11	<10	17	<10
Zinc	5	38	33	44	32	46	25
Moisture	%	23%	22%	19%	22%	23%	24%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C61	10354-C62	10354-C63	10354-C64	10354-C65	10354-C66
Sample Name		10354-BH34.A	10354-BH34.C	10354-BH35.A	10354-BH35.C	10354-BH36.A	10354-BH36.C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	0.9	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	1.0	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	119%	123%	125%	112%	112%	106%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	118%	120%	124%	111%	114%	106%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	111%	113%	110%	107%	106%	99%

Lab ID	PQL (mg/kg)	10354-C61	10354-C62	10354-C63	10354-C64	10354-C65	10354-C66
Sample Name		10354-BH34.A	10354-BH34.C	10354-BH35.A	10354-BH35.C	10354-BH36.A	10354-BH36.C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	120%	117%	115%	113%	116%	114%
Metals							
Arsenic	2	12	7.3	11	10	3.9	8.8
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	18	14	17	19	13	15
Copper	5	17	16	12	21	15	37
Lead	10	41	17	33	13	25	26
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	<10	<10	<10	21
Zinc	5	42	26	21	35	24	74
Moisture	%	17%	17%	11%	25%	25%	19%
pH (average for 3 measurements)		NT	5.1	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C67	10354-C68	10354-C69	10354-C70	10354-C71	10354-C72
Sample Name		10354-BH37.A	10354-BH38.A	10354-BH38.C	10354-BH39.A	10354-BH40.A	10354-BH41.A
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	114%	116%	110%	109%	113%	119%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	116%	119%	112%	112%	116%	126%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	107%	110%	100%	104%	104%	116%

Lab ID	PQL (mg/kg)	10354-C67	10354-C68	10354-C69	10354-C70	10354-C71	10354-C72
Sample Name		10354-BH37.A	10354-BH38.A	10354-BH38.C	10354-BH39.A	10354-BH40.A	10354-BH41.A
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	116%	116%	115%	113%	114%	116%
Metals							
Arsenic	2	3.5	4.4	<2	2.9	3.8	3.4
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	19	20	16	20	22	20
Copper	5	14	14	50	24	26	39
Lead	10	26	13	17	16	<10	17
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	27	14	10	27
Zinc	5	17	25	100	35	36	94
Moisture	%	16%	21%	14%	21%	22%	10%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C73	10354-C74	10354-C75	10354-C76	10354-C77	10354-C78
Sample Name		10354-BH42.A	10354-BH43.A	10354-BH44.A	10354-BH45.A	10354-BH46.A	10354-BH47.A
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	121%	120%	111%	114%	111%	111%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	129%	128%	119%	124%	118%	117%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	113%	115%	107%	117%	109%	108%

Lab ID	PQL (mg/kg)	10354-C73	10354-C74	10354-C75	10354-C76	10354-C77	10354-C78
Sample Name		10354-BH42.A	10354-BH43.A	10354-BH44.A	10354-BH45.A	10354-BH46.A	10354-BH47.A
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	122%	118%	119%	117%	122%	119%
Metals							
Arsenic	2	2.9	9.6	4.1	8.7	5.3	3.8
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	11	11	14	18	21	21
Copper	5	12	17	24	17	23	24
Lead	10	<10	<10	<10	<10	<10	<10
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	<10	<10	11	<10
Zinc	5	24	25	27	28	38	31
Moisture	%	18%	25%	22%	22%	19%	21%
pH (average for 3 measurements)		5.1	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	10354-C79	10354-C80	10354-C81	10354-C82	10354-C83	10354-C84
Sample Name		10354-BH48.A	10354-BH48.C	10354-BR1	10354-BR2	10354-BR3	10354-BR4
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	115%	113%	106%	106%	101%	101%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	118%	120%	101%	102%	98%	98%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	106%	107%	94%	96%	90%	91%

Lab ID	PQL (mg/kg)	10354-C79	10354-C80	10354-C81	10354-C82	10354-C83	10354-C84
Sample Name		10354-BH48.A	10354-BH48.C	10354-BR1	10354-BR2	10354-BR3	10354-BR4
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	120%	121%	114%	119%	117%	106%
Metals							
Arsenic	2	3.1	<2	4.5	4.8	3.2	8.4
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	17	15	12	21	21	14
Copper	5	19	19	22	41	50	33
Lead	10	31	<10	14	12	21	<10
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	<10	22	28	13
Zinc	5	36	19	33	66	110	54
Moisture	%	14%	20%	24%	24%	13%	20%
pH (average for 3 measurements)		NT	NT	NT	NT	NT	NT

Lab ID	PQL (mg/kg)	Blank 1	Blank spike 1	Matrix spike 1	Duplicate 1-Value 1	Duplicate 1-Value 2	Duplicate 1
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	102%	104%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	108%	107%	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	121%	120%	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	93%	97%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	108%	103%	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	121%	120%	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.		108%	108%	107%	106%	
OCPs							
aldrin	0.1	<0.1	99%	99%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	75%	85%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	108%	107%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		107%	106%	111%	110%	
OPPs							
chlorpyrifos	0.1	<0.1	98%	100%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	98%	102%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		100%	100%	99%	98%	

Lab ID	PQL (mg/kg)	Blank 1	Blank spike 1	Matrix spike 1	Duplicate 1-Value 1	Duplicate 1-Value 2	Duplicate 1
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	96%	94%	<50	<50	ACCEPT
>C16-C34	100	<100	NT	NT	<100	<100	ACCEPT
>C34-C40	100	<100	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	106%	113%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	101%	108%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	98%	105%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	99%	104%	<2	<2	ACCEPT
o-Xylene	1	<1	98%	106%	<1	<1	ACCEPT
Fluorobenzene	surr.		104%	111%	122%	118%	
Metals							
Arsenic	2	<2	90%	86%	18	19	ACCEPT
Cadmium	0.3	<0.3	115%	105%	<0.3	<0.3	ACCEPT
Chromium	5	<5	77%	114%	16	13	ACCEPT
Copper	5	<5	94%	105%	33	25	ACCEPT
Lead	10	<10	73%	114%	29	23	ACCEPT
Mercury	0.2	<0.2	103%	103%	<0.2	<0.2	ACCEPT
Nickel	10	<10	96%	114%	16	14	ACCEPT
Zinc	5	<5	111%	85%	58	46	ACCEPT
Moisture	%						
pH (average for 3 measurements)							

Lab ID	PQL (mg/kg)	Duplicate 2-Value 1	Duplicate 2-Value 2	Duplicate 2
Sample Name				
PAH				
Acenaphthene	0.3	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.	107%	106%	
OCPs				
aldrin	0.1	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	<0.1	ACCEPT
TCMX	surr.	111%	106%	
OPPs				
chlorpyrifos	0.1	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	<0.1	ACCEPT
PCB				
Total PCB		<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.	100%	99%	

Lab ID	PQL (mg/kg)	Duplicate 2-Value 1	Duplicate 2-Value 2	Duplicate 2
Sample Name				
TRH				
>C6-C10	35	<35	<35	ACCEPT
>C10-C16	50	<50	<50	ACCEPT
>C16-C34	100	<100	<100	ACCEPT
>C34-C40	100	<100	<100	ACCEPT
BTEX				
Benzene	0.5	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	110%	122%	
Metals				
Arsenic	2	20	20	ACCEPT
Cadmium	0.3	<0.3	<0.3	ACCEPT
Chromium	5	11	12	ACCEPT
Copper	5	34	45	ACCEPT
Lead	10	24	47	ACCEPT
Mercury	0.2	<0.2	<0.2	ACCEPT
Nickel	10	<10	<10	ACCEPT
Zinc	5	51	220	FAIL
Moisture	%			
pH (average for 3 measurements)				

Lab ID	PQL (mg/kg)	Blank 2	Blank spike 2	Matrix spike 2	Duplicate 3 - Value 1	Duplicate 3- Value 2	Duplicate 3
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	99%	99%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	107%	107%	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	119%	121%	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	90%	89%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	107%	104%	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	119%	121%	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.		108%	108%	106%	105%	
OCPs							
aldrin	0.1	<0.1	96%	98%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	67%	79%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	107%	108%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		104%	105%	111%	110%	
OPPs							
chlorpyrifos	0.1	<0.1	96%	102%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	93%	97%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		97%	95%	100%	98%	

Lab ID	PQL (mg/kg)	Blank 2	Blank spike 2	Matrix spike 2	Duplicate 3 - Value 1	Duplicate 3- Value 2	Duplicate 3
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	99%	98%	<50	<50	ACCEPT
>C16-C34	100	<100	NT	NT	<100	<100	ACCEPT
>C34-C40	100	<100	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	119%	126%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	109%	110%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	102%	103%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	105%	105%	<2	<2	ACCEPT
o-Xylene	1	<1	101%	103%	<1	<1	ACCEPT
Fluorobenzene	surr.		110%	115%	111%	121%	
Metals							
Arsenic	2	<2	87%	77%	7.2	10	ACCEPT
Cadmium	0.3	<0.3	105%	98%	<0.3	<0.3	ACCEPT
Chromium	5	<5	106%	113%	14	16	ACCEPT
Copper	5	<5	96%	106%	25	27	ACCEPT
Lead	10	<10	100%	115%	11	15	ACCEPT
Mercury	0.2	<0.2	94%	87%	<0.2	<0.2	ACCEPT
Nickel	10	<10	97%	108%	<10	<10	ACCEPT
Zinc	5	<5	98%	93%	34	35	ACCEPT
Moisture	%						
pH (average for 3 measurements)							

Lab ID	PQL (mg/kg)	Duplicate 4-Value 1	Duplicate 4-Value 2	Duplicate 4
Sample Name				
PAH				
Acenaphthene	0.3	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	<0.3	ACCEPT
Pyrene	0.3	0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.	108%	105%	
OCPs				
aldrin	0.1	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	<0.1	ACCEPT
TCMX	surr.	108%	106%	
OPPs				
chlorpyrifos	0.1	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	<0.1	ACCEPT
PCB				
Total PCB		<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.	95%	95%	

Lab ID	PQL (mg/kg)	Duplicate 4-Value 1	Duplicate 4-Value 2	Duplicate 4
Sample Name				
TRH				
>C6-C10	35	<35	<35	ACCEPT
>C10-C16	50	<50	<50	ACCEPT
>C16-C34	100	<100	<100	ACCEPT
>C34-C40	100	<100	<100	ACCEPT
BTEX				
Benzene	0.5	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	114%	117%	
Metals				
Arsenic	2	12	15	ACCEPT
Cadmium	0.3	<0.3	<0.3	ACCEPT
Chromium	5	25	21	ACCEPT
Copper	5	58	44	ACCEPT
Lead	10	200	130	ACCEPT
Mercury	0.2	0.5	0.2	ACCEPT
Nickel	10	14	11	ACCEPT
Zinc	5	88	68	ACCEPT
Moisture	%			
pH (average for 3 measurements)				

Lab ID	PQL (mg/kg)	Blank 3	Blank spike 3	Matrix spike 3	Duplicate 5-Value 1	Duplicate 5-Value 2	Duplicate 5
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	98%	98%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	99%	100%	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	96%	98%	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	96%	96%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	99%	100%	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	99%	99%	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.		96%	92%	85%	87%	
OCPs							
aldrin	0.1	<0.1	95%	96%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	96%	98%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	106%	108%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		100%	101%	101%	102%	
OPPs							
chlorpyrifos	0.1	<0.1	98%	101%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	95%	96%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		105%	102%	104%	102%	

Lab ID	PQL (mg/kg)	Blank 3	Blank spike 3	Matrix spike 3	Duplicate 5-Value 1	Duplicate 5-Value 2	Duplicate 5
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	97%	93%	<50	<50	ACCEPT
>C16-C34	100	<50	NT	NT	<100	<100	ACCEPT
>C34-C40	100	<50	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	125%	120%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	110%	108%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	104%	102%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	108%	101%	<2	<2	ACCEPT
o-Xylene	1	<1	103%	105%	<1	<1	ACCEPT
Fluorobenzene	surr.		116%	112%	124%	119%	
Metals							
Arsenic	2	<2	97%	90%	11	13	ACCEPT
Cadmium	0.3	<0.3	103%	105%	<0.3	<0.3	ACCEPT
Chromium	5	<5	106%	121%	18	23	ACCEPT
Copper	5	<5	95%	109%	16	17	ACCEPT
Lead	10	<10	103%	122%	15	16	ACCEPT
Mercury	0.2	<0.2	92%	97%	<0.2	<0.2	ACCEPT
Nickel	10	<10	94%	114%	<10	<10	ACCEPT
Zinc	5	<5	95%	99%	45	28	ACCEPT
Moisture	%						
pH (average for 3 measurements)							

Lab ID	PQL (mg/kg)	Duplicate 6-Value 1	Duplicate 6-Value 2	Duplicate 6
Sample Name				
PAH				
Acenaphthene	0.3	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.	98%	93%	
OCPs				
aldrin	0.1	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	<0.1	ACCEPT
TCMX	surr.	100%	97%	
OPPs				
chlorpyrifos	0.1	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	<0.1	ACCEPT
PCB				
Total PCB		<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.	106%	103%	

Lab ID	PQL (mg/kg)	Duplicate 6-Value 1	Duplicate 6-Value 2	Duplicate 6
Sample Name				
TRH				
>C6-C10	35	<35	<35	ACCEPT
>C10-C16	50	<50	<50	ACCEPT
>C16-C34	100	<100	<100	ACCEPT
>C34-C40	100	<100	<100	ACCEPT
BTEX				
Benzene	0.5	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	121%	123%	
Metals				
Arsenic	2	8.8	7.5	ACCEPT
Cadmium	0.3	<0.3	<0.3	ACCEPT
Chromium	5	28	38	ACCEPT
Copper	5	31	28	ACCEPT
Lead	10	17	20	ACCEPT
Mercury	0.2	<0.2	<0.2	ACCEPT
Nickel	10	18	18	ACCEPT
Zinc	5	65	54	ACCEPT
Moisture	%			
pH (average for 3 measurements)				

Lab ID	PQL (mg/kg)	Blank 4	Blank spike 4	Matrix spike 4	Duplicate 7-Value 1	Duplicate 7-Value 2	Duplicate 7
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	107%	109%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	114%	116%	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	109%	113%	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	101%	98%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	114%	116%	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	121%	125%	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.		117%	120%	123%	115%	
OCPs							
aldrin	0.1	<0.1	99%	101%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	77%	84%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	110%	116%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		108%	112%	120%	114%	
OPPs							
chlorpyrifos	0.1	<0.1	95%	97%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	99%	100%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		107%	107%	113%	103%	

Lab ID	PQL (mg/kg)	Blank 4	Blank spike 4	Matrix spike 4	Duplicate 7-Value 1	Duplicate 7-Value 2	Duplicate 7
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	98%	94%	<50	<50	ACCEPT
>C16-C34	100	<100	NT	NT	<100	<100	ACCEPT
>C34-C40	100	<100	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	127%	124%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	112%	111%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	107%	104%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	109%	104%	<2	<2	ACCEPT
o-Xylene	1	<1	105%	102%	<1	<1	ACCEPT
Fluorobenzene	surr.		117%	114%	117%	120%	
Metals							
Arsenic	2	<2	97%	83%	7.3	19	ACCEPT
Cadmium	0.3	<0.3	108%	115%	<0.3	<0.3	ACCEPT
Chromium	5	<5	115%	111%	14	22	ACCEPT
Copper	5	<5	101%	99%	16	17	ACCEPT
Lead	10	<10	106%	98%	17	44	ACCEPT
Mercury	0.2	<0.2	96%	96%	<0.2	<0.2	ACCEPT
Nickel	10	<10	96%	97%	<10	<10	ACCEPT
Zinc	5	<5	98%	116%	26	35	ACCEPT
Moisture	%						
pH (average for 3 measurements)							

Lab ID	PQL (mg/kg)	Duplicate 8-Value 1	Duplicate 8-Value 2	Duplicate 8
Sample Name				
PAH				
Acenaphthene	0.3	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.	113%	117%	
OCPs				
aldrin	0.1	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	<0.1	ACCEPT
TCMX	surr.	116%	121%	
OPPs				
chlorpyrifos	0.1	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	<0.1	ACCEPT
PCB				
Total PCB		<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.	104%	110%	

Lab ID	PQL (mg/kg)	Duplicate 8-Value 1	Duplicate 8-Value 2	Duplicate 8
Sample Name				
TRH				
>C6-C10	35	<35	<35	ACCEPT
>C10-C16	50	<50	<50	ACCEPT
>C16-C34	100	<100	<100	ACCEPT
>C34-C40	100	<100	<100	ACCEPT
BTEX				
Benzene	0.5	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	113%	114%	
Metals				
Arsenic	2	3.8	<2	ACCEPT
Cadmium	0.3	<0.3	<0.3	ACCEPT
Chromium	5	22	26	ACCEPT
Copper	5	26	26	ACCEPT
Lead	10	<10	13	ACCEPT
Mercury	0.2	<0.2	<0.2	ACCEPT
Nickel	10	10	12	ACCEPT
Zinc	5	36	38	ACCEPT
Moisture	%			
pH (average for 3 measurements)				

Lab ID	PQL (mg/kg)	Batch Blank 5	Batch Blank spike 5	Batch Matrix spike 5	Batch Duplicate 9-Value 1	Batch Duplicate 9-Value 2	Batch Duplicate 9
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	97%	94%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	98%	96%	0.5	0.5	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	2.0	2.2	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	2.0	2.1	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	2.6	2.7	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	1.2	1.2	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	0.9	0.9	ACCEPT
Chrysene	0.3	<0.3	NT	NT	2.0	2.2	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	103%	107%	4.5	5.0	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	1.1	1.1	ACCEPT
Naphthalene	0.3	<0.3	89%	85%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	98%	96%	0.5	0.5	ACCEPT
Pyrene	0.3	<0.3	107%	111%	4.6	5.3	ACCEPT
p-Terphenyl-d14	surr.		98%	95%	101%	105%	
OCPs							
aldrin	0.1	<0.1	93%	91%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	75%	79%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	99%	96%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		98%	95%	98%	105%	
OPPs							
chlorpyrifos	0.1	<0.1	89%	89%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	86%	85%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		91%	91%	89%	92%	

Lab ID	PQL (mg/kg)	Batch Blank 5	Batch Blank spike 5	Batch Matrix spike 5	Batch Duplicate 9-Value 1	Batch Duplicate 9-Value 2	Batch Duplicate 9
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	93%	90%	<50	<50	ACCEPT
>C16-C34	100	<100	NT	NT	110	<100	ACCEPT
>C34-C40	100	<100	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	99%	111%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	97%	106%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	96%	103%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	95%	102%	<2	<2	ACCEPT
o-Xylene	1	<1	95%	102%	<1	<1	ACCEPT
Fluorobenzene	surr.		100%	109%	110%	103%	
Metals							
Arsenic	2	<2	96%	93%	11	22	FAIL
Cadmium	0.3	<0.3	100%	98%	<0.3	<0.3	ACCEPT
Chromium	5	<5	103%	102%	15	17	ACCEPT
Copper	5	<5	98%	96%	44	49	ACCEPT
Lead	10	<10	99%	97%	120	140	ACCEPT
Mercury	0.2	<0.2	101%	100%	<0.2	<0.2	ACCEPT
Nickel	10	<10	92%	100%	12	19	ACCEPT
Zinc	5	<5	93%	124%	170	210	ACCEPT
Moisture	%						
pH (average for 3 measurements)							

Lab ID	PQL (mg/kg)	Duplicate 10-Value 1	Duplicate 10-Value 2	Duplicate 10
Sample Name				
PAH				
Acenaphthene	0.3	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.	106%	104%	
OCPs				
aldrin	0.1	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	<0.1	ACCEPT
TCMX	surr.	101%	99%	
OPPs				
chlorpyrifos	0.1	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	<0.1	ACCEPT
PCB				
Total PCB		<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.	94%	93%	

Lab ID	PQL (mg/kg)	Duplicate 10-Value 1	Duplicate 10-Value 2	Duplicate 10
Sample Name				
TRH				
>C6-C10	35	<35	<35	ACCEPT
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>C16-C34	100	<100	<100	ACCEPT
>C34-C40	100	<100	<100	ACCEPT
BTEX				
Benzene	0.5	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	120%	114%	
Metals				
Arsenic	2	4.5	4.6	ACCEPT
Cadmium	0.3	<0.3	<0.3	ACCEPT
Chromium	5	12	12	ACCEPT
Copper	5	22	24	ACCEPT
Lead	10	14	14	ACCEPT
Mercury	0.2	<0.2	<0.2	ACCEPT
Nickel	10	<10	<10	ACCEPT
Zinc	5	33	33	ACCEPT
Moisture	%			
pH (average for 3 measurements)				

Comment:
FAIL caused by inhomogenous matrix

General Comments and Glossary

Tests not covered by NATA are denoted with *.

Samples are analysed on "as received" basis.

Samples were delivered chilled	**Yes**
Samples were preserved in correct manner	**Yes**
Sample containers for volatile analysis were received with minimal headspace	**Yes**
Samples were analysed within holding time	**Yes**
Some samples have been subcontracted	**No**

1. All samples are tested in batches of 20.
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5. If heterogenous or insufficient material provided LCS is used as matrix spike for QA/QC purposes.
6. Duplicate sample and matrix spike recoveries may not be prepared on smaller jobs, however, were analysed at a frequency
7. QA/QC samples shown within the report that states the word "BATCH"; Batch Blank, Matrix Spike and Duplicate were prepared on samples from outside of reported job.

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INS: Insufficient sample for this test
>: Greater than
LCS: Laboratory Control Sample
NT: Not tested
<: Less than
RPD: Relative Percent Difference
NA: Test not required
PQL: Practical Quantitation Limit

Laboratory Acceptance Criteria

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals, 60-140% for organics is acceptable. Matrix heterogeneity may result in matrix spike analyses falling outside these limits.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:
Results <10 times the PQL : No Limit
Results between 10-20 times the PQL : RPD must lie between 0-50%
Results >20 times the PQL : RPD must lie between 0-30%
Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

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(02) 9648 6669
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ABN: 520 934 529 50

**Methods Number Description:

ESA-MP-01	Determination of metals by MP-AES
ESA-MP-02	Digestion of soil samples for MP-AES analysis
ESA-MP-03	Preparation of water samples for metals determination by MP-AES
ESA-MP-04	TCLP for inorganic contaminants
ESA-MP-05	Digestion of paint and dust samples for lead contect determination
ESA-MP-06	Digestion of air filters
ESA-MP-07	Digestion of swabs for determination of lead content in dust
ESA-P-ORG02	Analysis of PAHs by GC-MS
ESA-P-ORG03	Analysis of TRH and TPH by GC-FID
ESA-P-ORG04	Separatory funnel extraction of PAHs from water matrices including TCLP extracts
ESA-P-ORG05	Separatory funnel extraction of TRH and TPH from water matrices
ESA-P-ORG06	Silica gel clean up of soil and water extracts, prior analysis for STPH
ESA-P-ORG07	Extraction of BTEX and VTRX from soil matrices
ESA-P-ORG08	Analysis of soil extracts and waters by P&T GCMS
ESA-P-ORG09	Extraction of TRH from solid matrices
ESA-P-ORG14	Extraction of PCB (Aroclor) OCP OPP and PAH from soil matrices
ESA-P-ORG15	Analysis of PCB OCP OPP and PAH by GCMS
AS 1289.4.3.1	Determination of the pH value of a soil-Electrometric method
AS 1289.3.6.1	Determination of the particle size distribution of a soil - Standard method of analysis by sieving
T276	NSW RMS Test Method T 276 Foreign materials content of recycled crushed concrete
*Texture Assessment based on; Salinity Notes, Number 8, Oct 2000, ISSN 1 325-4448, "How to Texture soils & Test for Salinity"	
*ESA-P-16	Procedure for measurement of Electrical Conductivity EC
AS 1289.2.1.1	Soil moisture content tests—Determination of the moisture content of a soil—Oven drying method (standard method)

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Environmental and OH&S Laboratory

A division of A. D. Envirotech Australia Pty Ltd A.C.N. 093 452 950

Unit 4/10-11 Millennium Court,
Silverwater 2128
Ph: (02) 9648-6669

Analysis report: STC-76-10354-TB&TS1,2

Customer: A. D. Envirotech Australia Pty. Ltd.
Attention: Matthew Toole & Samuel Rouse

Sample Log In Details

Your reference: STC-76-10354-TB&TS1,2
No. of Samples: 4
Date Received: 06.04.2016
Date completed instructions received: 06.04.2016
Date of analysis: 06-07.04.2016

Report Details

Report Date: 10.04.2016
Method number:** ESA-P-ORG08

Results Authorised By:

Dr Dominika Wojtalewicz (MRACI CCHEM)
Quality System Manager/Chemist

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Lab ID	PQL (µg/L)	10354-C85	10354-C86	10354-C87	10354-C88
Sample Name		10354-Trip Blank1	10354-Trip Spike1	10354-Trip Blank2	10354-Trip Spike2
BTEX					
Benzene	1	<1	103%	<1	111%
Toluene	1	<1	100%	<1	105%
Ethylbenzene	1	<1	100%	<1	100%
m, p- Xylene(s)	2	<2	99%	<2	100%
o-Xylene	1	<1	99%	<1	102%
Fluorobenzene	surr.	109%	102%	137%	106%

Lab ID	PQL (µg/L)	Batch Blank 1	Batch Blank spike 1	Batch Matrix spike 1	Batch Duplicate 1 - Value 1	Batch Duplicate 1 - Value 2	Batch Duplicate 1
Sample Name							
BTEX							
Benzene	1	<1	99%	111%	<1	<1	ACCEPT
Toluene	1	<1	97%	106%	<1	<1	ACCEPT
Ethylbenzene	1	<1	96%	103%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	95%	102%	<2	<2	ACCEPT
o-Xylene	1	<1	95%	102%	<1	<1	ACCEPT
Fluorobenzene	surr.		100%	109%	110%	103%	

Lab ID	PQL (µg/L)	Batch Duplicate 2 - Value 1	Batch Duplicate 2 - Value 2	Batch Duplicate 2
Sample Name				
BTEX				
Benzene	1	<1	<1	ACCEPT
Toluene	1	<1	<1	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	120%	114%	

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ESA-P-ORG05	Separatory funnel extraction of TRH and TPH from water matrices
ESA-P-ORG07	Extraction of BTEX and VTRX from soil matrices
ESA-P-ORG08	Analysis of soil extracts and waters by P&T GCMS
ESA-P-ORG09	Extraction of TRH from solid matrices
ESA-P-ORG11	Extraction of OCP OPP and PAH from soil matrices
ESA-P-ORG12	Analysis of OCP OPP and PAHs by GC-MS
AS 1289.4.3.1	Determination of the pH value of a soil-Electrometric method

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