Appendix 13

Stage 1 / Stage 2 Environmental Site Assessment

ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

CONCRETE RECYCLERS GROUP

ON

PRELIMINARY STAGE 1 / STAGE 2 ENVIRONMENTAL SITE ASSESSMENT

FOR

FORMER COMPOUND AND CONTAINER STORAGE

AT

7 MONTORE ROAD, MINTO NSW 2566

10 JANUARY 2018 **REF: E29448KrptRev1**

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EXECUTIVE SUMMARY

Concrete Recyclers Group ('the client') commissioned Environmental Investigation Services (EIS)[1] to undertake a Preliminary Stage 1/Stage 2 Environmental Site Assessment (ESA) for the former compound and container storage at 7 Montore Road, Minto, NS to assess the suitability of the site for industrial use as a resource recovery centre. The site location is shown on Figure 1 and the assessment was confined to the site boundaries as shown on Figure 2.

The scope of work included the following: review of site information including background and site history information; a site inspection to identify Areas of Environmental Concern (AEC); preparation of a Preliminary Conceptual Site Model (PCSM); design and implementation of a sampling, analysis and quality plan (SAQP); interpretation of the analytical results against the adopted Site Assessment Criteria (SAC); Data Quality Assessment; undertake a Tier 1 Risk Assessment and review of CSM; and preparation of a report presenting the results of the assessment.

A review of the site history information has indicated the following:

- The aerial photographs and land title records suggest that the site has been used for a mixture of residential and commercial purposes from 1899 to the present day;
- The historical business directories search did not identify any particular land uses within a buffer of 150m of the site, which were considered to have had the potential to migrate and resulted in contamination of the site;
- Council records indicated that consent was granted for erection of a waste recycling depot in 1989 and for storage, processing, cutting, sawing and selling railway sleepers, timber and firewood in 1998;
- A review of the SafeWork NSW records did not identify any licences to store dangerous goods on the site; and
- NSW EPA records indicated that the site was formerly licenced/regulated under the POEO Act for waste storage, transfer, separating or processing.

The CSM identified the following AEC at the site:

- Fill Material (Entire Site): The site may have potentially been historically filled to achieve existing levels. The fill may have been imported from various sources and can contain elevated concentrations of contaminants.
- Pesticides: The historical aerial photographs indicated that the site may have been used for farming/agricultural purposes prior to 1970's. The use of pesticides during this period could have resulted in potential contamination.
- Hazardous Building Material: The buildings on the site have been constructed prior to the 1990's. Hazardous building materials were used for construction purposes during this period. The material can pose a potential contamination source during demolition/development.

Soil samples for this investigation were obtained from 33 sampling points as shown on the attached Figure 2. This density meets of the minimum sampling density recommended by the EPA. The sampling locations were placed in accessible areas of the site. Ten (10) additional samples were collected from the two stockpiles on the site (Northern and Central). Selected samples were analysed for a range of Contaminants of Potential Concern (CoPC) as outlined in the SAQP. The results were assessed against the SAC.

The results of the testing identified the following contamination issues. Reference should be made to the figures attached in the appendices:

Elevated Contaminants of CoPC above Human Health SAC:

Fragments of asbestos cement were identified in the two stockpiles (central and northern) and on the site surface. In addition to this, matted material containing asbestos was identified in shallow surface soils. Due to the discrete nature of asbestos containing materials (ACM) it is considered likely that more ACM will be

[1] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

exposed during works on the site. The matted material could be crushed by hand pressure and was therefore considered friable.

The contamination in this location is considered to pose a moderate to high risk to human receptors at the site in the current site configuration and will require remediation and/or management.

Elevated Contaminants of CoPC above Ecological SAC:
Concentrations of Benzo(a)Pyrene were encountered above the Ecological SAC adopted for this investigation. These contaminants can pose a risk to the environmental receptors.

Elevated concentrations of zinc and B(a)P in criteria (TP4, TP7, TP11, TP21, TP27 and TP31) were not considered to pose an unacceptable risk to ecological receptors for the following reasons:

1. The site is in an urban setting and located in an industrial area, therefore it would be reasonable to assume there are no endangered species on site;
2. The existing flora does not show any significant signs of stress; and
3. The data indicates that the elevated concentrations are confined to a shallow surface layer of fill that can be easily penetrated by roots.

Conclusion:
Based on the scope of works undertaken, EIS are of the opinion that the CoPC identified at the site pose a risk to the receptors. EIS consider that the site can be made suitable for future industrial use provided that the following recommendations are implemented to better manage the identified risks:

1. Undertake a Detailed Soil Investigation for Asbestos in accordance with the Western Australian Asbestos Guidelines 2009 (endorsed in NEPM 2013)**;**

2. Prepare an Asbestos Management Plan (AMP) for future site excavation and/or construction works;

3. Where necessary, prepare an Environmental Management Plan (EMP) for the ongoing management of contamination remaining on site. The EMP will require establishment of appropriate public notification under Section 149(2) of the E&PAA 1979 or a covenant registered on the title to land under Section 88B of the Conveyancing Act 1919.

In the event unexpected conditions are encountered during development work or between sampling locations that may pose a contamination risk, all works should stop and an environmental consultant should be engaged to inspect the site and address the issue.

The conclusions and recommendations should be read in conjunction with the limitations presented in the body of the report.

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ABBREVIATIONS

Ambient Background Concentrations	**ABC**
Added Contaminant Limits	**ACL**
Asbestos Containing Material	**ACM**
Australian Drinking Water Guidelines	**ADWG**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Asbestos Health Screening Levels	**ASL**
Acid Sulfate Soil	**ASS**
Above Ground Storage Tank	**AST**
Below Ground Level	**BGL**
Bureau of Meteorology	**BOM**
Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene	**BTEXN**
Cation Exchange Capacity	**CEC**
Contaminated Land Management	**CLM**
Construction Management Plan	**CMP**
Chain of Custody	**COC**
Contaminant of Primary Concern	**CoPC**
Conceptual Site Model	**CSM**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Ecological Assessment Criteria	**EAC**
Ecological Investigation Levels	**EILs**
Ecological Screening Level	**ESL**
Environmental Management Plan	**EMP**
Excavated Natural Material	**ENM**
Environmental Protection Agency	**EPA**
Environmental Site Assessment	**ESA**
Ecological Screening Level	**ESL**
Fibre Cement Fragments	**FCF**
General Approvals of Immobilisation	**GAI**
General Solid Waste	**GSW**
Health Investigation Level	**HILs**
Hardness Modified Trigger Values	**HMTV**
Health Screening Level	**HSLs**
International Organisation of Standardisation	**ISO**
Lab Control Spike	**LCS**
Light Non-Aqueous Phase Liquid	**LNAPL**
Local Government Authority	**LGA**
Map Grid of Australia	**MGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Polycyclic Aromatic Hydrocarbons	**PAH**

ABBREVIATIONS

Potential Contaminants of Concern	**PCC**
Photo-ionisation Detector	**PID**
Practical Quantitation Limit	**PQL**
Preliminary Site Investigation	**PSI**
Quality Assurance	**QA**
Quality Control	**QC**
Remediation Action Plan	**RAP**
Relative Percentage Difference	**RPD**
Restricted Solid Waste	**RSW**
Site Assessment Criteria	**SAC**
Sampling, Analysis and Quality Plan	**SAQP**
Site Audit Statement	**SAS**
Site Audit Report	**SAR**
Specific Contamination Concentration	**SCC**
Standard Penetration Test	**SPT**
Semi-Volatile Organic Compounds	**sVOC**
Standard Sampling Procedure	**SSP**
Standard Water Level	**SWL**
Standard Sampling Procedure	**SSP**
Trip Blank	**TB**
Toxicity Characteristic Leaching Procedure	**TCLP**
Total Recoverable Hydrocarbons	**TRH**
Trip Spike	**TS**
Upper Confidence Limit	**UCL**
United States Environmental Protection Agency	**USEPA**
Underground Storage Tank	**UST**
Virgin Excavated Natural Material	**VENM**
Volatile Organic Compounds	**VOC**
Volatile Organic Chlorinated Compound	**VOCC**
Workplace, Health and Safety	**WHS**

1 INTRODUCTION

Concrete Recyclers Group ('the client') commissioned Environmental Investigation Services (EIS)[2] to undertake a Preliminary Stage 1/Stage 2 Environmental Site Assessment (ESA) for the former compound and container storage at 7 Montore Road, Minto, NSW, to assess the suitability of the site for industrial use as a resource recovery centre.

The site location is shown on Figure 1 and the assessment was confined to the site boundaries as shown on Figure 2.

1.1 Proposed Development Details

It is understood that the site has been the subject of uncontrolled filling, and the status of the fill material needs to be confirmed. The proposed development is a resource recovery centre.

1.2 Objectives

The assessment objectives are to:

- Assess the potential for site contamination;
- Assess the potential risk the contamination may pose to the site receptors;
- Provide a preliminary waste classification for the off-site disposal of soil; and
- Comment on the suitability of the site for the proposed landuse.

1.3 Scope of Work

The assessment was undertaken generally in accordance with an EIS proposal (Ref: EP9762K) of 26 April 2016 and written acceptance from the client of 21 May 2016.

The scope of work included the following:

- Review of site information including background and site history information;
- A site inspection to identify Areas of Environmental Concern (AEC);
- Preparation of a Preliminary Conceptual Site Model (PCSM);
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment;
- Undertake a Tier 1 Risk Assessment and review of CSM; and
- Preparation of a report presenting the results of the assessment.

The report was prepared with reference to regulations/guidelines outlined in the table below. Individual guidelines are also referenced within the text of the report.

[2] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

Table 1-1: Guidelines

Guidelines/Regulations
Contaminated Land Management Act 1997[3]
State Environmental Planning Policy No.55 – Remediation of Land 1998[4]
Guidelines for Consultants Reporting on Contaminated Sites 2011[5]
Guidelines for the NSW Site Auditor Scheme, 2nd Edition 2006[6]
National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended 2013[7]

[3] NSW Government Legislation, (1997), *Contaminated Land Management Act 1997.* (referred to as CLM Act 1997)

[4] NSW Government, (1998), *State Environmental Planning Policy No. 55 – Remediation of Land.* (referred to as SEPP55)

[5] NSW Office of Environment and Heritage (OEH), (2011), *Guidelines for Consultants Reporting on Contaminated Sites.* (referred to as Reporting Guidelines 2011)

[6] NSW DEC, (2006), *Guidelines for the NSW Site Auditor Scheme, 2nd ed.* (referred to as Site Auditor Guidelines 2006)

[7] National Environment Protection Council (NEPC), (2013), *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013).* (referred to as NEPM 2013)

2 SITE INFORMATION

2.1 Site Identification

Table 2-1: Site Identification

Current Site Owner:	Camolaw Pty Limited
Site Address:	7 Montore Road, Minto, NSW 2566
Lot & Deposited Plan:	Lot 52 in DP618900
Current Land Use:	Vacant Site – formerly compound and container storage
Proposed Land Use:	Commercial/industrial
Local Government Authority (LGA):	Campbelltown City Council
Current Zoning:	IN1 – General industrial
Site Area (m^2):	23,000 approximately
RL (approx.):	40 – 42m
Geographical Location (MGA) (approx.):	N: -34.015501 E: 150.500184
Site Location Plan:	Figure 1
Sample Location Plan:	Figure 2

2.2 Site Location and Regional Setting

The site is located in a predominantly industrial area of Minto. The site is bounded by an easement down to Bow Bowing Canal to the west, other industrial properties to the north, east and south. The closest surface water feature is Bow Bowing Canal, located approximately 20m to west of the site.

2.3 Topography

The site was located within generally flat topography. A strip of land just inside the north-west boundary of the site stepped down by approximately 0.5-1.0m the site boundary to form a terraced area. The area outside of the western boundary fell steeply (approximately 5m-7m) down to the Bow Bowing Canal.

2.4 Site Inspection

A walkover inspection of the site was undertaken by EIS on 31 May and 1 June 2016. The inspection was limited to accessible areas of the site and immediate surrounds.

At the time of the inspection, the site was vacant. The front half of the site, the northern portion, was covered in compacted sandy gravel and the southern half of the site was typically covered in long grasses and weeds. Along the northwest boundary of the site the site levels dropped down by between 1-1.5m to the west in keeping with the regional topography and the neighbouring canal.

A stockpile (400m^3) referred to as the Northern Stockpile (NS) was observed positioned along the northern boundary of the site and turning on a right angle into the site at the western end. A second large stockpile (~~1,200m^3) referred to as the Central Stockpile (CS) was located in the centre of the site positioned in an east-west direction.

Two site office containers were located adjacent to the northwest end of the central stockpile. Adjacent to the southeast corner of the central stockpile, a bulldozer, shipping container and numerous heavy vehicle tyres (>1m in diameter) were observed. In the southeast corner of the site two shipping containers and other industrial steel/metal formwork was observed.

Selected site photographs are presented on the next page:

Table 2-2: Site Photographs

	**Photograph 1:** Looking southwest across the northern portion of the site. Two site office and the 'central stockpile' visible in the background.

	**Photograph 2:** Looking southeast across the southern portion of the site. Steel formwork and shipping containers visible in the background.
	**Photograph 3:** Embankment along the northwest boundary.

2.5 Surrounding Land Use

The immediate surrounds included the following land uses:

- North – Industrial;
- South – Industrial;
- East – Industrial; and
- West – Bow Bowing Canal; and industrial beyond.

2.6 Underground Services

The 'Dial Before You Dig' (DBYD) plans were reviewed for the assessment. Major services which could pose a potential migratory pathway were not identified at the site.

2.7 Regional Geology

A review of the regional geological map of Wollongong-Port Hacking (1985[8]) indicates that the site is underlain by Ashfield Shale of the Wianamatta Group, which typically consists of black to dark grey shale and laminate.

2.8 Acid Sulfate Soil (ASS) Risk

The site is not located in an ASS risk area.

2.9 Hydrogeology

A review of groundwater bore records was undertaken. The search was limited to registered bores located within a radius of approximately 1.0km of the site.

The search indicated approximately 4 registered bores within the search area. Copies of the records are attached in the appendices. A brief summary of relevant information is presented below:

Table 2-3: Summary of Groundwater Bores

Reference	Distance from Site (m) (approx.)	Direction & Gradient from Site	Final Depth (m)	Standing Water Level (SWL) (m)	Registered Purpose	Potential Receptor
GW112953	583	North, on grade	8.0	NA	Monitoring	No
GW112954	587	Northeast, on grade	7.79	NA	Monitoring	No
GW112952	588	North, on grade	8.2	NA	Monitoring	No
GW112955	597	Northeast, on grade	6.76	NA	Monitoring	No

A review of the regional geology and groundwater bore information indicates that the subsurface condition at the site is expected to consist of residual soils overlying relatively shallow bedrock. The occurrence of groundwater that could be utilised as a resource for beneficial use is considered to be relatively low under such conditions. A perched aquifer in the subsurface may be present.

2.10 Receiving Water Bodies

The site location and regional topography indicates that excess surface water flows has the potential to enter the Bow Bowing Canal running parallel to the western boundary of the site. This water body can be a potential receptor.

[8] Department of Mineral Resources, (1985), *1:100,000 Geological Map of Wollongong-Port Hacking (Series 9029-9129).*

3 SITE HISTORY INFORMATION

3.1 Review of Historical Aerial Photographs

Historical aerial photographs available at the NSW Department of Lands were reviewed for the assessment. Copies of selected photographs are attached in the appendices. A summary of the relevant information is presented in the following table:

Table 3-1: Summary of Historical Aerial Photos

Year	Details
1956	The photograph was of very poor quality. The site and surrounding area appeared to be typically cleared land, possibly agricultural. The meandering tree line extending through the photograph from the south to the north, cut through the northeast corner of the site, also visible were several small tress in the central eastern area of the site.
1961	The site and its immediate surrounds appeared similar to the 1956 photograph.
1965	The site and its immediate surrounds appeared similar to the 1961 photograph.
1970	The northwest quarter of the site appeared to have been filled, with visible vehicle tracks running parallel to the Bow Bowing Canal to the north and through the southern site boundary. The filling appeared to extend along the canal to the north.
1984	The site appeared grass covered and generally flat with small shrubs along the western boundary and some across the site. Montore Road and structures on the neighbouring property to the east were visible. Volvo appeared to have a warehouse to the southeast of the site. Tracks were visible on the property to the south. The Bow Bowing Canal appeared to have been lined and straightened.
1994	The site appeared to have been cleared of its grass cover with small structures or materials stored along the southern boundary. Structures were present on the properties to the north and south of the site, and roads were visible on the western side of the canal.
2006	The site appeared to be generally grass covered and vacant. Several more large structures are visible on the properties to the south and west of the site.
2009	The site appeared similar to the 2006 photograph. Large structures were visible on the property to the northeast of the site.
2014	The site and its immediate surrounds appeared similar to the 2009 photograph.

Year	Details
2016 (Google earth)	 The northern half of the site appeared to be gravel covered with the southern half covered in grass and/or shrubs. Several container-size structures appeared to be situated in the southeast corner of the site and in the central west. A section of gravelled area was also visible in the southeast corner along with several stacks of tyres. The immediate surrounding sites appeared similar to the 2014 photograph.

3.2 Historical Business Directories

Historical business directories from the year 1991 were reviewed as part of the assessment. The historical business directories search did not identify any particular landuses within a buffer of 150m of the site, which were considered to have had the potential to migrate and resulted in contamination of the site.

3.3 Review of Land Title Records

Land title records were reviewed for the assessment. The record search was undertaken by Advance Legal Searchers Pty Ltd. Copies of the title records are attached in the appendices.

The title records indicate the following:

- Between 1899 and 1969 the site was owned by individuals; a farmer and a dairyman;
- Between 1969 and 1989 the site was owned by the government or Council including: The State Planning Authority of New South Wales, NSW Planning and Environment Commission, Minister Administering the Environment Planning and Assessment Act and Director, Macarthur Growth Area;
- From 1989 to the current day the site has been owned by companies including M.J. Welsh Pty Limited, Foamco Industries Pty Limited and Camolaw Pty Limited.

3.4 Review of Campbelltown City Council Information

3.4.1 Publically Accessible Information

Council records available under the access to public information were reviewed for the assessment. A summary of the relevant information is provided in the table on the following page:

Table 3-2: Summary of Council Records

Record Number	Application Details
E300060/1998	Use of the site for the storage, processing, cutting sawing and selling of railway sleepers, timber and firewood
BA 3157/91	Construction of a factory
D 518/89	Filling of site – Application to install approximately 0.5m of imported fill to level the site
DA E3/89	Erection of a waste recycling depot

3.4.2 Section 149 Planning Certificate

The s149 (2 and 5) planning certificates were reviewed for the assessment. Copies of the certificates are attached in the appendices.

A summary of the relevant information is outlined below:

a) The site is not located in an area of ecological significance;
b) The site is not deemed to be:
   - significantly contaminated;
   - subject to a management order;
   - subject of an approved voluntary management proposal; or
   - subject to an on-going management order under the provisions of the CLM Act 1997;
c) The site is not subject to a Site Audit Statement (SAS);
d) The site is not located within a Class 1 or 2 ASS risk area; and
e) The site is not located in a heritage conservation area.

3.5 SafeWork NSW Records

SafeWork NSW records were reviewed for the assessment. Copies of relevant documents are attached in the appendices.

The search did not identify any licences to store dangerous goods including underground fuel storage tanks (USTs) or above ground storage tanks (ASTs) at the site.

3.6 NSW EPA Records

The NSW EPA records available online were reviewed for the assessment. Copies of relevant documents are attached in the appendices. A summary of the relevant information is provided in the following table:

Table 3-3: Summary of NSW EPA Online Records

Source	Details
CLM Act 1997[9]	There were no notices for the site under Section 58 of the Act.
NSW EPA List of Contaminated Sites[10]	The site is not listed on the NSW EPA register.
POEO Register[11]	The POEO register indicates that: • The subject site was formerly "Licensed/Regulated Activities (revoked or surrendered)" under the POEO Act – M&C Pty Ltd, waste storage, transfer, separating or processing; • The site to the immediate north was listed as formerly Licensed/Regulated Activities (revoked or surrendered) – Capral Limited, metal processing (Hazardous); • The site beyond the Bow Bowing Canal to the west was listed as formerly Licensed/Regulated Activities (revoked or surrendered) – Redox Pty Ltd, chemical storage and waste generation; and • The site to the immediate south was listed as Licensed Activities under the POEO Act - Foamco Industries Pty Limited, plastic resins productions. Several other sites Licensed Activities; Delicensed Activities still Regulated; and/or Formerly Licensed/Regulated Activities were identified within 1000m of the subject site. Please see the appendices for further information.

3.7 Summary of Site History Information

A review of the site history information has indicated the following:

- The aerial photographs and land title records suggest that the site has been used for a mixture of residential and commercial purposes from 1899 to the present day;
- The historical business directories search did not identify any particular land uses within a buffer of 150m of the site, which were considered to have had the potential to migrate and resulted in contamination of the site;
- Council records indicated that consent was granted for erection of a waste recycling depot in 1989 and for storage, processing, cutting, sawing and selling railway sleepers, timber and firewood in 1998;
- A review of the SafeWork NSW records did not identify any licences to store dangerous goods on the site; and

[9] http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx
[10] http://www.epa.nsw.gov.au/clm/publiclist.htm
[11] http://www.epa.nsw.gov.au/prpoeoapp/

- NSW EPA records indicated that the site was formerly licenced/regulated under the POEO Act for waste storage, transfer, separating or processing.

3.8 Integrity of Site History Information

The majority of the site history information has been obtained from government organisations as outlined above. The veracity of the information from these sources is considered to be relatively high.

A certain degree of information loss can be expected given the age of the development; gap between aerial photographs; and lack of detailed information prior to the 1900's.

4 PRELIMINARY CONCEPTUAL SITE MODEL (PCSM)

The AEC identified below are based on a review of the site and site history information outlined previously in this report. The AEC can either be a point source or widespread areas impacted by current or historical activities.

Table 4-1: PCSM

AEC / Extent	PCC/CoPC	Potential Exposure Pathway and Media	Potential Receptors
Fill Material – Entire Site The site appears to have been historically filled to achieve existing levels. The fill may have been imported from various sources and can contain elevated concentrations of contaminants.	Heavy metals, TRH, BTEXN, PAHs, OCPs, OPPs, PCB and asbestos	Direct Contact – dermal contact; ingestion; and inhalation of dust, vapours and fibres. Media - soil, groundwater and vapour.	Human Receptors – Site occupants; visitors; development and maintenance workers; and off-site occupants. Environmental Receptors – Flora and fauna at the site and immediate surrounds; receiving water bodies; others identified in the above sections.
Use of Pesticides – The historical aerial photographs indicated that the site may have been used for farming/agricultural purposes prior to 1970's. The use of pesticides during this period could have resulted in potential contamination.	Heavy metals, OCPs and OPPs	Direct Contact – dermal contact; ingestion; and inhalation of dust. Media – soil and groundwater.	Human Receptors – As Above Environmental Receptors – As Above
Hazardous Building Material – The aerial photographs indicate that former structures at the site were demolished/removed. The use of hazardous building material in the former structures could have resulted in potential contamination.	Asbestos, lead and PCBs	Direct Contact – dermal contact; ingestion; and inhalation of dust and fibres. Media – soil and air.	Human Receptors – As Above Environmental Receptors – As Above

5 SAMPLING, ANALYSIS AND QUALITY PLAN

5.1 Data Quality Objectives (DQO)

The NEPM 2013 defines the DQO process as a seven step iterative planning tool used to define the type, quantity and quality of data needed to inform decisions relating to the environmental condition of the site.

The DQO process is detailed in the US EPA document *Guidance on systematic planning using the data quality process (2006[12])* and the NSW DEC document *The Guidelines for the NSW Site Auditor Scheme, 2nd Edition (2006[13])*.

These seven steps are applicable to this assessment as summarised in the table below:

Table 5-1: DQOs – Seven Steps

Step	Input
State the Problem	The PCSM has identified AEC at the site which may pose a risk to the site receptors. An intrusive investigation is required to assess the risk and comment on the suitability of the site for the proposed landuse. The site has been filled and was formerly a waste recycling depot. The EIS project team will include: project principal (PP) and/or project associate (PA); project engineer/scientist (PE); and field engineer/scientist (FE) as outlined in the quality recorded checklist maintained for the project in accordance with our ISO 9001 certification.
Identify the Decisions/ Goal of the Study	The data collection is project specific and has been designed based on the following information: • Review of site information including site history; • AEC, PCC, receptors, pathways and medium identified in the PCSM; • Development of Site Assessment Criteria (SAC) for each media; and • The use of decision statements outlined below: The decisions of the study are: 1. Are any of the results above the SAC? 2. Do any of the contaminants pose a risk to the site receptors? 3. Is further investigation required? 4. Is the site suitable for the proposed landuse? The data will be assessed in the following way: 1) Statistical analysis will be used to assess the laboratory data against the SAC. The following criteria will be adopted: ➢ The 95% Upper Confidence Limit (UCL) value of the arithmetic mean concentration of each contaminant should be less than the SAC;

[12] US EPA, (2006), *Guidance on Systematic Planning using the Data Quality Objectives Process.* (referred to as US EPA 2006)
[13] NSW DEC, (2006), *Guidelines for the NSW Site Auditor Scheme, 2nd ed.* (referred to as Site Auditor Guidelines 2006)

Step	Input
	➢ The standard deviation (SD) of the results must be less than 50% of the SAC; and ➢ No single value exceeds 250% of the relevant SAC. 2) Statistical calculations will not be undertaken if all results are below the SAC; and 3) Statistical calculations will not be undertaken on Health Screening Levels (HSLs) – elevated point source contamination associated with petroleum hydrocarbons can pose a vapour risk to receptors.
Identify Information Inputs	The following information will be collected: • Soil samples based on subsurface conditions; • Fibre Cement Fragments (FCF) in the vicinity of the sampling points; • The SAC will be designed based on the criteria outlined in NEPM 2013. Other criteria will be used as required and detailed in this report; • The samples will be analysed in accordance with the analytical methods outlined in NEPM 2013; • Field screening information (i.e. PID data, presence of hydrocarbons etc.) will be taken into consideration in selecting the analytical schedule; and • Any additional information that may arise during the field work will also be used as data inputs.
Define the Study Boundary	The sampling will be confined to the site boundaries as shown in Figure 2. Fill has been identified as an AEC. The source of fill has not been established. Fill is considered to be heterogeneous material with PCC occurring in random pockets or layers. The presence of PCC in between sampling points cannot be measured. The areas excluded from the investigation are outlined in the data gaps.
Develop the analytical approach (or decision rule)	The following acceptable limits will be adopted for the data quality assessment: • The following acceptance criteria will be used to assess the RPD results: ➢ results > 10 times the practical quantitation limit (PQL), RPDs < 50% are acceptable; ➢ results between 5 and 10 times PQL, RPDs < 75% are acceptable; ➢ results < 5 times PQL, RPDs < 100% are acceptable; and ➢ An explanation is provided if RPD results are outside the acceptance criteria. • Acceptable concentrations in Trip Spike (TS) and Trip Blanks (TB) samples. Non-compliance to be documented in the report; • The following acceptance criteria will be used to assess the primary laboratory QA/QC results. Non-compliance to be documented: ➢ <u>RPDs</u>: - Results that are < 5 times the PQL, any RPD is acceptable; and - Results > 5 times the PQL, RPDs between 0-50% are acceptable; ➢ <u>LCS recovery and matrix spikes</u>: - 70-130% recovery acceptable for metals and inorganics;

Step	Input
	- 60-140% recovery acceptable for organics; and - 10-140% recovery acceptable for VOCs; ➢ Surrogate spike recovery: - 60-140% recovery acceptable for general organics; and - 10-140% recovery acceptable for VOCs; ➢ Blanks: All less than PQL.
Specify the performance or acceptance criteria	NEPM 2013 defines decision errors as '*incorrect decisions caused by using data which is not representative of site conditions'*. This can arise from errors during sampling or analytical testing. A combination of these errors is referred to as '*total study error*'. The study error can be managed through the correct choice of sample design and measurement. Decision errors can be controlled through the use of hypothesis testing. The test can be used to show either that the baseline condition is false or that there is insufficient evidence to indicate that the baseline condition is false. The null hypothesis is an assumption that is assumed to be true in the absence of contrary evidence. In this case, for example, the PCC identified in the PCSM is considered to pose a risk to receptors unless proven not to. The null hypothesis has been adopted for this assessment.
Optimise the design for obtaining data	The most resource-effective design will be used in an optimum manner to achieve the assessment objectives.

5.2 Soil Sampling Plan and Methodology

The soil sampling plan and methodology adopted for this assessment is outlined in the table below:

Table 5-2: Soil Sampling Plan and Methodology

Aspect	Input
Sampling Density	The NSW EPA Contaminated Sites Sampling Design Guidelines (1995[14]) recommend a sampling density for an environmental assessment based on the size of the investigation area. The guideline provides a minimum number of sampling points required for the investigation on a systematic sampling pattern. The guidelines recommend sampling from a minimum of 33 evenly spaced sampling points for this site with an area of approximately 23,000m^2. Samples for this investigation were obtained from 33 sampling points as shown on the attached Figure 2. This density meets the minimum sampling density recommended by the EPA.

[14] NSW EPA, (1995), *Contaminated Sites Sampling Design Guidelines.* (referred to as EPA Sampling Design Guidelines 1995)

Aspect	Input
	Additional samples were collected from the two stockpiles on the site. The stockpile located along the northern boundary of the site was estimated to be approximately 400m^3. Four (4) samples were obtained from this stockpile. The stockpile located in the centre of the site was estimated to be approximately 1,200m^3. Six (6) samples were obtained from this stockpile.
Sampling Plan	The sampling locations were placed on a systematic plan with a grid spacing of approximately 30m between sampling locations. A systematic plan was considered suitable to address potential contaminants associated with the fill material. Two fill stockpiles were located on the site, one to the north and one in the centre. Distribution of contamination in the stockpiles was considered to be random. A judgemental sampling plan was adopted to address potential contaminants associated with the fill material in the stockpiles.
Exclusion Areas (Data Gaps)	Sampling was not undertaken in inaccessible areas of the site. These areas have been excluded from the investigation.
Sampling Equipment	Soil samples were obtained on 31 May and 1 June 2016 in accordance with the standard sampling procedure (SSP) attached in the appendices. Sampling locations were set out using a hand held GPS unit (with an accuracy of ±5m). In-situ sampling locations were cleared for underground services by an external contractor prior to sampling as outlined in the SSP. The sample locations were excavated using a Backhoe/excavator bucket. Samples were obtained directly from the bucket using hand equipment (i.e. trowel, rake) as shown on the test pit logs attached in the appendices:
Sampling Collection and Field QA/QC	Soil samples were collected from the fill and natural profiles based on field observations. The sampling depths are shown on the logs attached in the appendices. Additional samples were obtained when relatively deep fill (>0.5m) was encountered. Samples were also obtained when there was a distinct change in lithology or based on the observations made during the investigation. During sampling, soil at selected depths was split into primary and duplicate samples for field QA/QC analysis. Samples were placed in glass jars with plastic caps and teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sampling location, sampling depth and date in accordance with the SSP.

Aspect	Input
Field PID Screening for VOCs	A portable Photoionisation Detector (PID) was used to screen the samples for the presence of VOCs and to assist with selection of samples for hydrocarbon analysis. The sensitivity of the PID is dependent on the organic compound and varies for different mixtures of hydrocarbons. Some compounds give relatively high readings and some can be undetectable even though present in identical concentrations. The portable PID is best used semi-quantitatively to compare samples contaminated by the same hydrocarbon source. The PID is calibrated before use by measurement of an isobutylene standard gas. All the PID measurements are quoted as parts per million (ppm) isobutylene equivalents. PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. VOC data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases.
Sample Preservation	Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with the SSP. On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard COC procedures.

5.3 Analytical Schedule

The analytical schedule is outlined in the following table:

Table 5-3: Analytical Schedule

PCC/CoPC	Fill Samples	Natural Soil Samples
Heavy Metals	39	4
TRH/BTEXN	39	4
PAHs	39	4
OCPs	39	4
PCBs	39	4
Asbestos	39	4
TCLP PAHs	8	NA

PCC/CoPC	Fill Samples	Natural Soil Samples
Asbestos in Fibre Cement Fragments (FCF)	1	NA

5.3.1 Laboratory Analysis

The samples were analysed by the NATA Accredited laboratory/s using the analytical methods detailed in Schedule B(3) of NEPM 2013. Reference should be made to the laboratory reports attached in the appendices for further details.

Table 5-4: Laboratory Details

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicates, trip blanks and trip spike samples)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	147823
Inter-laboratory duplicates	Envirolab Services Pty Ltd WA, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	181575

6 SITE ASSESSMENT CRITERIA (SAC)

The SAC adopted for the assessment is outlined in the table below. The SAC has been derived from the NEPM 2013 and other guidelines as applicable. The guideline values for individual contaminants are presented in the attached report tables.

Table 6-1: SAC Adopted for this Investigation

Guideline	Applicability
Health Investigation Levels (HILs) (NEPM 2013)	The HIL-D criteria for 'commercial/industrial' land use have been adopted for this assessment.
Health Screening Levels (HSLs) (NEPM 2013)	The HSL-D criteria for 'commercial/industrial' land use have been adopted for this assessment.
Ecological Assessment Criteria (EAC) (NEPM 2013)	A preliminary screening of ecological risk has been undertaken based on the limited information available at this stage. The EAC criteria for 'commercial/industrial' exposure setting have been adopted. Soil parameters: pH; cation exchange capacity (CEC); and clay content have not been analysed for the assessment. On this basis, the EIL and ESL calculations have taken the 'worst case' scenario in order to generate the EAC.
Asbestos in Soil	The 'presence/absence' of asbestos in soil has been adopted as the assessment criterion for the Preliminary Site Investigation (PSI).
Waste Classification (WC) Criteria	The criteria outlined in the NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014[15]) has been adopted to classify the material for off-site disposal.

[15] NSW EPA, (2014), *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

7 INVESTIGATION RESULTS

7.1 Subsurface Conditions

A summary of the subsurface conditions encountered during the investigation is presented in the table below. Reference should be made to the test pit logs attached in the appendices for further details.

Table 7-1: Summary of Subsurface Conditions

Profile	Description (m in bgl)
Fill	Fill material was encountered at the surface in all test pits with the exception of TP18, TP28 and TP32. The fill extended to depths of approximately 0.1m to 1.0m. TP24, TP29 and TP31 were terminated in the fill at a maximum depth of approximately 0.35m. The fill typically comprised of: silty clay; silty sand; sandy gravel; sandy silty clay; sand; sandy gravelly clay; silty sandy clay; silty sand; and silty gravelly sand. The fill contained inclusions of: concrete; brick; plastic; plastic sheet; metal; metal wire; ash; slag; ceramic pipe and ceramic tile.
Natural Soil	Natural silty clay soil was encountered beneath the fill material in all test pits with the exception of TP24, TP29 and TP31.
Groundwater	Groundwater seepage was not encountered in any of the test pits during the investigation.

7.2 Description of Stockpiles

7.2.1 Northern Stockpile (NS)

The northern stockpile was located in the northern section of the site running parallel to the northern boundary and extending into the site adjacent to the western boundary. The stockpile was estimated to contain approximately 400m^3 of fill material.

The fill is generally described as comprising: silty sand, fine to medium grained light grey to light brown with fragments of concrete, brick, blue metal gravels, metal, ceramic pipe and tile, glass fragments, fibre cement fragment (containing asbestos) and root fibres.

7.2.2 Central Stockpile (CS)

The central stockpile was located in the centre of the site running east west. The stockpile was estimated to contain approximately 1,200m^3 of fill material.

The fill is generally described as comprising: silty sand and silty clay, light brown to medium brown with fragments of concrete, brick, blue metal gravels, metal, ceramic pipe and tile, asphalt, glass fragments, fibre cement fragment (containing asbestos), shale fragments and root fibres.

7.3 Field Screening

A summary of the field screening results are presented in the table below.

Table 7-2: Summary of Field Screening

Aspect	Details (m in bgl)
PID Screening of Soil Samples for VOCs	PID soil sample headspace readings are presented in attached report tables and the COC documents attached in the appendices. All results were 0 ppm equivalent isobutylene which indicates a lack of PID detectable VOCs.

7.4 Soil Laboratory Results

The soil laboratory results are compared to the relevant SAC in the attached report tables. A summary of the results assessed against the SAC is presented below.

Table 7-3: Summary of Soil Laboratory Results

Analyte	Results Compared to SAC
Heavy Metals	**HILs:** All heavy metal results were below the HIL-D criteria. **EILs:** All heavy metal results were below the EIL commercial/industrial criteria. **WC:** All heavy metal results were less than the relevant CT1 and SCC1 criteria.
TRH	**HSLs:** All TRH results were below the HSL-D criteria. **ESLs:** All TRH results were below the ESL commercial/industrial criteria. **WC:** All TRH results were less than the relevant CT1 and SCC1 criteria.
BTEXN	**HSLs:** All BTEXN results were below the HSL-D criteria. **ESLs:** All BTEXN results were below the ESL commercial/industrial criteria. **WC:** All BTEX results were less than the relevant CT1 and SCC1 criteria.

<table>
<tr><th>Analyte</th><th>Results Compared to SAC</th></tr>
<tr><td>PAHs</td><td>
<u>HILs:</u>
All PAH results were below the HIL-D criteria.

<u>HSLs:</u>
All naphthalene results were below the HSL-D criteria.

<u>ESLs:</u>
Elevated concentrations of benzo(a)pyrene were encountered above the ESL commercial/industrial criteria as outlined below:

<table>
<tr><th>Analyte</th><th>Sample/Depth</th><th>Description</th><th>ESL (mg/kg)</th><th>Concentration (mg/kg)</th></tr>
<tr><td rowspan="6">Benzo(a)pyrene</td><td>TP4 (0.0-0.25)</td><td rowspan="6">Fill</td><td rowspan="6">1.4</td><td>5.2</td></tr>
<tr><td>TP7 (0.0-0.1)</td><td>3.9</td></tr>
<tr><td>TP11 (0.0-0.1)</td><td>1.7</td></tr>
<tr><td>TP21 (0.0-0.1)</td><td>4.4</td></tr>
<tr><td>TP27 (0.0-0.15)</td><td>4.5</td></tr>
<tr><td>TP31 (0.0-0.2)</td><td>1.8</td></tr>
</table>
<u>Summary of Statistical Calculation:</u>
Four results were above the 250% of the SAC. Therefore, statistical calculations were not performed on the fill data.

<u>EILs:</u>
All naphthalene results were below the EIL commercial/industrial criteria.

<u>WC:</u>
All total PAH results were less than the relevant CT1 and SCC1 criteria.

Eight results for benzo(a)pyrene (BaP) were greater than the CT1 criterion. TCLP leachates were prepared from the eight samples and analysed for PAHs. The results were less than the TCLP1 criteria.
</td></tr>
<tr><td>OCPs</td><td>
<u>HILs:</u>
All OCP and OPP results were below the HIL-D criteria.

<u>EILs:</u>
All DDT results were below the EIL commercial/industrial criteria.

<u>WC:</u>
All OCP and OPP results were less than the relevant CT1 and SCC1 criteria.
</td></tr>
<tr><td>PCBs</td><td>
<u>HILs:</u>
All PCB results were below the HIL-D criterion.
</td></tr>
</table>

Analyte	Results Compared to SAC
	WC: All PCB results were less than the SCC1 criterion.
Asbestos	Asbestos was detected in matted material in one soil sample (TP14 0.0-0.2). Asbestos was detected in all five representative fragments of fibre cement analysed.

8 DATA QUALITY ASSESSMENT

As part of the data quality assessment the following data quality indicators (DQIs) were assessed: precision, accuracy, representativeness, completeness and comparability as outlined in the table below. Reference should be made to the appendices for an explanation of the individual DQI.

Table 8-1: Assessment of DQIs

Completeness

Field Considerations:

- The investigation was designed to target the AEC identified at the site. A systematic and targeted sampling plan was adopted based on the AEC as outlined in the report;
- Samples were obtained from various depths based on the subsurface conditions encountered at the sampling locations. All samples were recorded on the test pit logs. All sampling points are shown on the attached Figure 2;
- The investigation was undertaken by trained staff in accordance with the SSP; and
- Documentation maintained during the field work is attached in the appendices where applicable.

Laboratory Considerations:

- Selected samples were analysed for a range of PCC/CoPC;
- All samples were analysed by NATA registered laboratories in accordance with the analytical methods outlined in NEPM 2013;
- Appropriate analytical methods and PQLs were used by the laboratories; and
- Samples analysed for TCLP PAHs were outside the 14 days holding time for samples analysed. This is not considered to have an impact on the data set due to the following:
  - The main contaminant of concern from a health based point of view was benzo[a]pyrene. This PAH has a high molecular weight and low vapour pressure and is relatively stable;
  - The sample has been stored in a refrigerator at the lab; and
  - The sample was analysed within 28 days of sampling;

Comparability

Field Considerations:

- The investigation was undertaken by trained staff in accordance with the SSP;
- The climate conditions encountered during the field work were noted on the site description record maintained in the job file; and
- Consistency was maintained during sampling in accordance with the SSP.

Laboratory Considerations:

- All samples were analysed in accordance with the analytical methods outlined in NEPM 2013;
- Appropriate PQLs were used by the laboratories for all analysis (other than those outlined above);
- All primary, intra-laboratory duplicates and other QA/QC samples were analysed by the same laboratory; and
- The same units were used by the laboratories for all of the analysis.

Representativeness

Field Considerations:

- The investigation was designed to obtain appropriate media encountered during the field work as outlined in the SAQP. Groundwater, dust and/or vapour sampling was outside the scope of this assessment; and
- All media identified in the SAQP was sampled.

Laboratory Considerations:

- All samples were analysed in accordance with the SAQP.

Precision

Field Considerations:

- The investigation was undertaken in accordance with the SSP.

Laboratory Considerations:

- Analysis of field QA/QC samples including inter and intra-laboratory duplicates, trip blanks (TB) and trip spikes (TS) as outlined below;
- The field QA/QC frequency adopted for the investigation is outlined below;
- Calculation of the Relative Percentage Difference (RPD) from the primary and duplicate results (the RPD calculation equation is outlined in the attached appendices);
- Assessment of RPD results against the acceptance criteria outlined in **Section 5.1.**

Intra-laboratory RPD Results:

Soil Samples at a frequency of 5% of the primary samples:

- DUPKT1 is a soil duplicate of primary sample TP33 (0.0-0.2)
- DUPKT3 is a soil duplicate of primary sample TP2 (0.0-0.2)

The intra-laboratory results are presented in the attached report tables. The results indicated that field precision was acceptable.

Inter-laboratory RPD Results:

Soil Samples at a frequency of 3% of the primary samples:

- DUPKT2 is a soil duplicate of primary sample TP12 (0.0-0.2)

The inter-laboratory results are presented in the attached report tables. The results indicated that field precision was acceptable.

Trip Spike (TS):

One soil TS was analysed for BTEX at a frequency of one spike per batch of volatiles. The results are presented in the attached report tables.

The results ranged from 96% to 98% and indicated that field preservation methods were appropriate.

Trip Blank (TB):

One soil TB was analysed for BTEX at a frequency of one blank per batch of volatiles. The results are presented in the attached report tables.

The results were all less than the PQLs.

Accuracy

Field Considerations:

- The investigation was undertaken in accordance with the SSP.

Laboratory Considerations:

- The analytical quality assessment adopted by the laboratory/s was in accordance with the NATA and NEPM 2013 requirements as outlined in the analytical report/s;
- A review of the reports indicates the following comments noted by the laboratory/s:

Envirolab Report 147823 – A portion of the supplied asbestos sample was sub-sampled for asbestos analysis according to Envirolab procedures. The laboratory RPD acceptance criteria was exceeded in one sample for copper. A triplicate result was issued to account for this.

Envirolab Report 147823 – Organics tested outside recommended holding time. A portion of the supplied asbestos sample was sub-sampled for asbestos analysis according to Envirolab procedures.

9 WASTE CLASSIFICATION OF SOIL FOR OFF-SITE DISPOSAL

The waste classification of soil for off-site disposal is summarised in the following table:

Table 9-1: Waste Classification

Site Extent / Material Type	Classification	Disposal Option
Fill material across the site including the northern and central stockpiles	General Solid Waste (non-putrescible) (GSW) containing asbestos	A NSW EPA landfill licensed to receive the waste stream. The landfill should be contacted to obtain the required approvals prior to commencement of excavation.
Natural silty clay soil	Virgin excavated natural material (VENM)	VENM is considered suitable for re-use on-site, or alternatively, the information included in this report may be used to assess whether the material is suitable for beneficial reuse at another site as fill material. Alternatively, the natural material can be disposed of as VENM to a facility licensed by the NSW EPA to receive the waste stream.

If the site is going to be excavated we recommend that this VENM classification of the underlying natural soils is confirmed following removal of all the fill soil. Material classified as VENM must not be mixed with any fill material (including building rubble) as this will invalidate the VENM classification. Where doubt exists about the difference between fill and VENM material, an environmental/geotechnical engineer should be contacted.

10 TIER 1 RISK ASSESSMENT AND REVIEW OF PCSM

10.1 Summary of Site Contamination

The assessment has identified the following issues associated with the AEC identified at the site. The site contamination data is shown on the attached Figure 3.

10.1.1 Asbestos in fibre cement fragments and matted material

Asbestos was detected in four representative fibre cement fragments (FCF) encountered within the two stockpiles (central and northern). The source of this contamination is considered to have been imported with the fill material.

Asbestos was detected in one representative fibre cement fragment (FCF) encountered on the site surface and within matted material in shallow surface soils. The source of this contamination is considered to have been imported with the fill material.

10.1.2 B(a)P above ESL

Six samples encountered B(a)P above the ESL criteria (TP4, TP7, TP11, TP21, TP27 and TP31). The elevated B(a)P concentrations were encountered in surface soils. The most likely source of this contamination is considered to be imported fill material that may have been used for levelling the site and/or landscaping purposes. The impacted fill material extends to a depths of between 0.1m and 1.0m bgl.

10.2 Assessment of Risk to Receptors

For a contaminant to represent a risk to a receptor, the following three conditions must be present:

1. Source – The presence of a contaminant;
2. Pathway – A mechanism or action by which a receptor can become exposed to the contaminant; and
3. Receptor – The human or ecological entity which may be adversely impacted following exposure to contamination.

If one of the above components is missing, the potential for adverse risks is relatively low.

The assessment has identified the following contamination issues at the site:

Table 10-1: Tier 1 Risk Assessment and Review of PCSM

Contaminant of Primary Concern (CoPC)	Receptor and Exposure Pathway	Discussion and Risk Rating
Asbestos in FCF and matted material	Human Receptors: Inhalation of airborne asbestos fibres	Fragments of asbestos cement were identified in the two stockpiles (central and northern) and on the site surface. In addition to this, matted material containing asbestos was identified in shallow surface soils. Due to the discrete nature of asbestos containing materials (ACM) it is considered likely that more ACM will be exposed during works on the site. The matted material could be crushed by hand pressure and was therefore considered friable. EIS are of the opinion that the risk posed to human receptors is moderate to high in the current site configuration and will require remediation and/or management.
B(a)P	Environmental Receptors: Direct exposure to plants and animals	The elevated concentrations of B(a)P in TP4, TP7, TP11, TP21, TP27 and TP31 are not considered to pose unacceptable ecological risk for the following reasons: • The site is in an urban setting and located in an industrial area, therefore it would be reasonable to assume there are no endangered species on site; • The existing flora does not show any significant signs of stress; and • The data indicates that the elevated concentrations are confined to a shallow surface layer of fill that can be easily penetrated by roots.

10.3 Nature and Extent Asbestos Contamination

Due to the discrete nature of asbestos containing materials in fill, it is likely that additional asbestos containing materials are located within the fill at the site.

All surface ACM should be removed from the site by a suitably licensed asbestos contractor and disposed of to a NSW Licensed EPA facility.

Following the removal of the surface ACM the two options below are to be considered to address the potential remnant ACM soil impact at the site:

1. Undertake a detailed soil investigation (DSI) for asbestos in accordance with the Western Australian Asbestos Guidelines 2009 (endorsed in NEPM 2013) to assess if asbestos hot spot areas can be estimated for remediation purposes or whether the estimated asbestos concentration on the site is below the guideline concentration specified in the WA guidelines;

2. Excavation and off-site disposal of all of the fill material from across the site including the two stockpiles (refer to **Section 8**); or
3. Capping of the site with clean fill and implementation of an Environmental Management Plan (EMP).

A detailed soil investigation for asbestos would include the following:

- Sampling of fill soil from 66 test pits evenly spread across the site (the full asbestos sampling density is twice the normal density specified in the NSW EPA Sampling Design Guidelines 1995);
- Spreading of excavated soil, raking and sieving of soil through a 7mm x 7mm sieve; and
- Obtaining bulk soil samples (500ml) for asbestos analysis at the laboratory.

The Western Australian Asbestos Guidelines 2009 guideline does make allowance for asbestos containing materials to remain on site. However, the guideline levels are very stringent and difficult to achieve. If asbestos contamination was to remain on site it would need to be managed under an Environmental Management Plan (EMP) prepared for the site to reduce the risk of exposure during future excavation and maintenance activities.

The EMP and asbestos contamination would need to be recorded on the Section 149 Planning Certificate.

10.4 Fate and Transport of Contaminants

The potential fate and transport of PCC/CoPC identified at the site is summarised in the following table:

Table 10-2: Fate and Transport of PCC/CoPC

PCC/CoPC	Fate and Transport
Non-volatile contaminants including: heavy fraction PAHs and asbestos	With the exception of asbestos, non-volatile contaminants are predominantly confined to the soil and groundwater medium. The mobility of these contaminants varies depending on: the nature and type of contaminant present (e.g. leachability, viscosity etc.); soil type/porosity; surface water infiltration; groundwater levels; and the rate of groundwater movement. Higher molecular weight PAHs (e.g. BaP) are relatively insoluble in water. TCLP data also indicates that the BaP is relatively insoluble. The risk of off-site migration of the PAHs is considered to be very low. **Presence of Asbestos** FCF was identified within the two stockpiles (central and northern) and on the site surface. The FCF could not be broken by hand pressure and was therefore considered to be bonded.

PCC/CoPC	Fate and Transport
	Matted material containing asbestos was identified within surface soils at one location (TP14). The matted material was able to be broken by hand pressure and is therefore considered to be friable. The potential transport of asbestos fibres is associated with the disturbance of asbestos contaminated soils and release of fibres into the atmosphere. This is likely to occur during excavation works. A number of studies have found that soils effectively filter out asbestos fibres and retain them within the soil matrix. The studies concluded that there is no significant migration of asbestos fibres, either through soil or groundwater. Any disturbance of asbestos contaminated soils during excavation works increases the potential release of asbestos fibres in to atmosphere. An Asbestos Management Plan must be prepared and implemented for the site. **Site Conditions** Surface water has the potential to infiltrate into the subsurface at the subject site via the unsealed surface of a majority of the site. Surface water infiltration could increase the migration potential of certain contaminants. Excess surface water has the potential to run-off into Bow Bowing Canal located to the west of the site.

10.5 Data Gaps

Groundwater at the site has not been assessed.

11 CONCLUSION

EIS consider that the report objectives outlined in **Section 1.2** have been addressed.

Based on the scope of work undertaken, EIS are of the opinion that the AEC identified in the PCSM pose a relatively low risk to the site receptors.

The decisions listed in **Section 5.1** are addressed in the table below:

Table 11-1: Decision Results

Decision Statement	Decision Result
1. Are any of the soil results above the SAC?	Yes: • FCF (bonded) and matted material (friable) containing asbestos was identified on the site; and • Elevated concentrations of benzo(a)pyrene were encountered above the ecological SAC.
2. Do any of the contaminants pose a risk to site receptors?	Yes, the asbestos could pose a risk to human receptors. The risk posed by the benzo(a)pyrene to ecological receptors was not considered to be significant.
3. Is further investigation required?	Yes. See below.
4. Is the site suitable for the proposed industrial use?	The site can be made suitable subject to the recommendations below.

EIS consider that the site can be made suitable for proposed industrial use provided that the following recommendations are implemented to better manage the identified risks:

1. Either undertake a Detailed Soil Investigation for Asbestos in accordance with the Western Australian Asbestos Guidelines 2009 (endorsed in NEPM 2013) or develop a plan to cap the site**;**

2. Prepare an Asbestos Management Plan (AMP) for future site excavation and/or construction works;

3. Where necessary, prepare an Environmental Management Plan (EMP) for the ongoing management of contamination remaining on site. The EMP will require establishment of appropriate public notification under Section 149(2) of the E&PAA 1979 or a covenant registered on the title to land under Section 88B of the Conveyancing Act 1919.

In the event unexpected conditions are encountered during development work or between sampling locations that may pose a contamination risk, all works should stop and an environmental consultant should be engaged to inspect the site and address the issue.

11.1 Regulatory Requirement

The regulatory requirements applicable for the site are outlined in the following table:

Table 11-2: Regulatory Requirement

Guideline	Applicability
Duty to Report Contamination 2009[16]	The requirement to notify the NSW EPA regarding site contamination should be assessed once the results of the additional investigation work have been reviewed and a remedial strategy (if necessary) has been selected. Please note that in the event the recommendations for additional work and remediation/management are not undertaken, there may be justification to notify the EPA. EIS can be contacted for further advice regarding notification.
POEO Act 1997	Section 143 of the POEO Act 1997 states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner.
Work Health and Safety Code of Practice 2011[17]	Sites contaminated with asbestos become a 'workplace' when work is carried out there and require a register and asbestos management plan.
Dewatering Consent	In the event groundwater is intercepted during any site works, dewatering may be required. Council, NSW Office of Water (NOW) and other relevant approvals (from discharge authorities like Sydney Water etc.) should be obtained prior to the commencement of dewatering.

[16] NSW Department of Environment and Climate Change, (2009), *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997.* (referred to as Duty to Report Contamination 2009)

[17] WorkCover NSW, (2011), *WHS Regulation: Code of Practice – How to Manage and Control Asbestos in the Workplace.*

12 LIMITATIONS

The report limitations are outlined below:

- EIS accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the EIS proposal; and terms of contract between EIS and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes;
- The investigation and preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, EIS has not undertaken any verification process, except where specifically stated in the report;
- EIS has not undertaken any assessment of off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- EIS accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- EIS have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. EIS should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa; and
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

LIST OF IN-TEXT TABLES

IMPORTANT INFORMATION ABOUT THIS REPORT

These notes have been prepared by EIS to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors
This report has been prepared in response to specific project requirements as stated in the EIS proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

- The proposed land use is altered;
- The defined subject site is increased or sub-divided;
- The proposed development details including size, configuration, location, orientation of the structures or landscaped areas are modified;
- The proposed development levels are altered, eg addition of basement levels; or
- Ownership of the site changes.

EIS/J&K will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by EIS to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment for any purpose other than that originally intended without first conferring with the consultant.

Changes in Subsurface Conditions
Subsurface conditions are influenced by natural geological and hydrogeological process and human activities. Groundwater conditions are likely to vary over time with changes in climatic conditions and human activities within the catchment (e.g. water extraction for irrigation or industrial uses, subsurface waste water disposal, construction related dewatering). Soil and groundwater contaminant concentrations may also vary over time through contaminant migration, natural attenuation of organic contaminants, ongoing contaminating activities and placement or removal of fill material. The conclusions of an assessment report may have been affected by the above factors if a significant period of time has elapsed prior to commencement of the proposed development.

This Report is based on Professional Interpretations of Factual Data
Site assessments identify actual subsurface conditions at the actual sampling locations at the time of the investigation. Data obtained from the sampling and subsequent laboratory analyses, available site history information and published regional information is interpreted by geologists, engineers or environmental scientists and opinions are drawn about the overall subsurface conditions, the nature and extent of contamination, the likely impact on the proposed development and appropriate remediation measures.

Actual conditions may differ from those inferred, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise the impact. For this reason, site owners should retain the services of their consultants throughout the development stage of the project, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

Assessment Limitations
Although information provided by a site assessment can reduce exposure to the risk of the presence of contamination, no environmental site assessment can eliminate the risk. Even a rigorous professional assessment may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

Misinterpretation of Site Assessments by Design Professionals

Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment report. To minimise problems associated with misinterpretations, the environmental consultant should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to contamination issues.

Logs Should not be Separated from the Assessment Report

Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however contractors can still misinterpret the logs during bid preparation if separated from the text of the assessment. If this occurs, delays, disputes and unanticipated costs may result. In all cases it is necessary to refer to the rest of the report to obtain a proper understanding of the assessment. Please note that logs with the 'Environmental Log' header are not suitable for geotechnical purposes as they have not been peer reviewed by a Senior Geotechnical Engineer.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete assessment should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of subsurface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations such as contractors.

Read Responsibility Clauses Closely

Because an environmental site assessment is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

REPORT FIGURES

AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

This plan should be read in conjunction with the EIS report.

Title: **SITE LOCATION PLAN**

Location: 7 MONTORE ROAD
MINTO, NSW

Report No: E29448K

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 7/07/2016 11:02:51 AM DWG FILE: S:\5 EIS\5C EIS JOBS\29000'S\E29448K MINTO\CAD\E29448K.DWG

LEGEND

- APPROXIMATE SITE BOUNDARY
- TP(Fill Depth) TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
- CS SAMPLE LOCATION (CENTRAL STOCKPILE)
- NS SAMPLE LOCATION (NORTHERN STOCKPILE)

0 10 20 30 40 50
SCALE 1:1000 @A3 METRES

This plan should be read in conjunction with the EIS report.

Title: **SAMPLE LOCATION PLAN**

Location: 7 MONTORE ROAD MINTO, NSW

Report No: E29448K

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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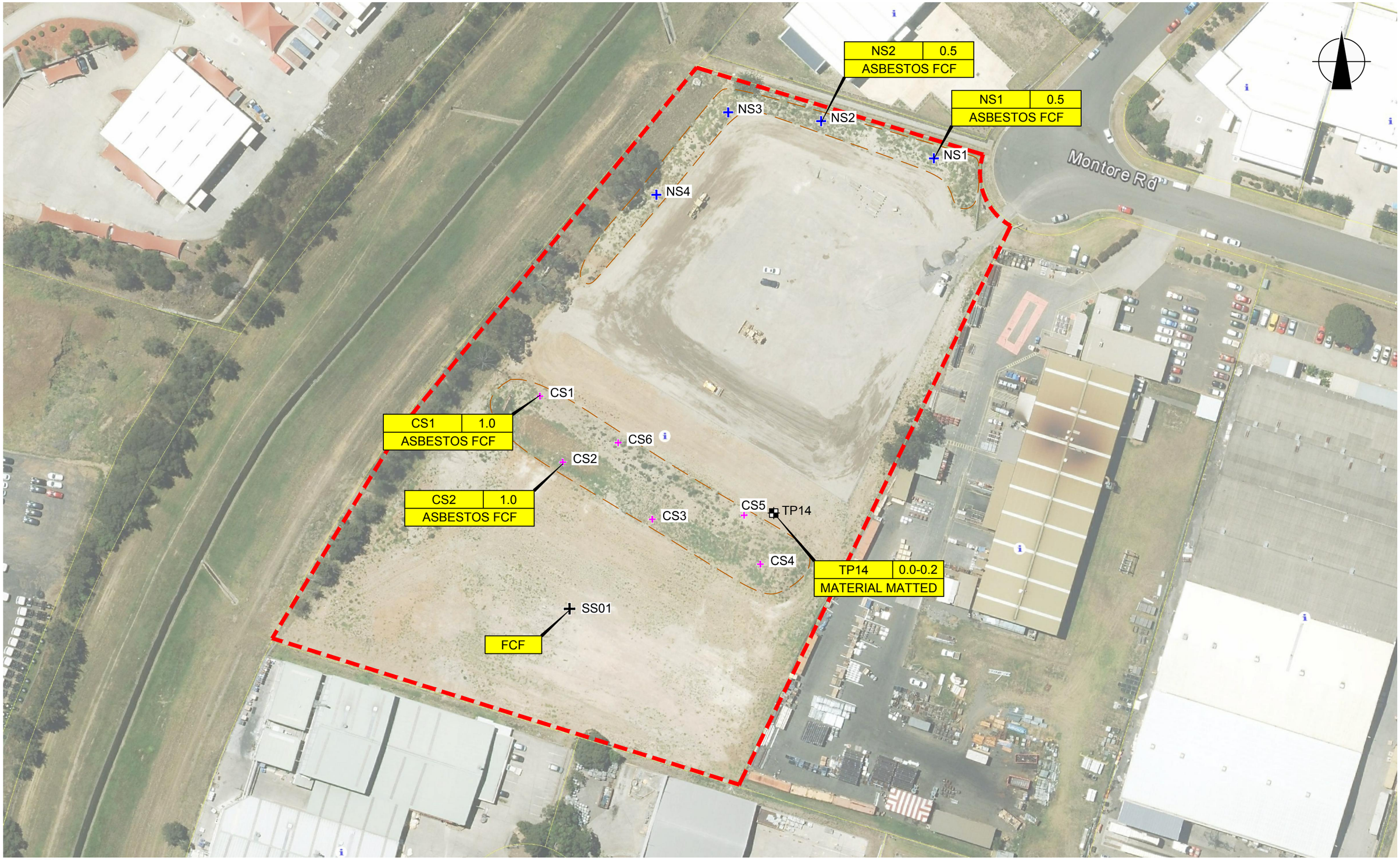

LEGEND

TP(Fill Depth)	TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
+ CS	SAMPLE LOCATION (CENTRAL STOCKPILE)
+ NS	SAMPLE LOCATION (NORTHERN STOCKPILE)
+ SS	SURFACE SAMPLE - FIBRE CEMENT FRAGMENT (FCF)

SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION (mg/kg)

SOIL CONTAMINATION ABOVE SAC FOR HUMAN HEALTH RISK

0 10 20 30 40 50
SCALE 1:1000 @A3 METRES

This plan should be read in conjunction with the EIS report.

Title: **SITE CONTAMINATION PLAN - HUMAN HEALTH RISK**

Location: 7 MONTORE ROAD MINTO, NSW

Report No: E29448K

Figure No: 3

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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LEGEND

TP(Fill Depth) TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)

SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION (mg/kg)

SOIL CONTAMINATION ABOVE SAC FOR ENVIRONMENTAL RISK

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

This plan should be read in conjunction with the EIS report.

Title: **SITE CONTAMINATION PLAN - ECOLOGICAL RISK**

Location: 7 MONTORE ROAD MINTO, NSW

Report No: E29448K

Figure No: 4

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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LABORATORY SUMMARY TABLES

TABLE A
SOIL LABORATORY RESULTS COMPARED TO HILs
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)	TOTAL PCBs	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI [2]	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P TEQ [3]	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chlorpyrifos		
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100
Site Assessment Criteria (SAC) [1]			3000	900	3600	240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																				
NS1	0.5	Fill	8	LPQL	8	30	28	LPQL	6	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
NS1	0.5	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**Chrysotile & Amosite asbestos detected**
NS2	0.5	Fill	LPQL	LPQL	8	17	25	LPQL	9	55	0.78	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
NS2	0.5	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**Chrysotile, Amosite & Crocidolite asbestos detected**
NS3	0.5	Fill	4	LPQL	9	16	15	LPQL	5	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
NS4	0.5	Fill	5	LPQL	12	17	26	LPQL	9	66	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS1	1	Fill	6	LPQL	15	24	25	LPQL	12	59	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS1	1	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**Chrysotile, Amosite & Crocidolite asbestos detected**
CS2	1	Fill	5	LPQL	14	20	18	LPQL	12	49	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS2	1	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**Chrysotile & Amosite asbestos detected**
CS3	1	Fill	6	LPQL	15	22	20	LPQL	10	49	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS4	1.2	Fill	7	LPQL	18	29	21	LPQL	18	59	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS5	1	Fill	12	LPQL	15	33	28	LPQL	12	55	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS6	1	Fill	5	LPQL	14	38	36	LPQL	9	58	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
SS01	-	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**Chrysotile & Amosite asbestos detected**
TP1	0.4-0.5	Natural	7	LPQL	11	24	17	LPQL	12	38	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP2	0.0-0.1	Fill	6	LPQL	12	23	16	LPQL	10	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP3	0.25-0.45	Fill	4	LPQL	9	13	13	LPQL	7	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP4	0.0-0.25	Fill	LPQL	LPQL	20	42	13	LPQL	16	33	58.2	7.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP5	0.0-0.1	Fill	7	LPQL	15	27	25	LPQL	12	61	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP6	0.4-0.5	Natural	5	LPQL	12	23	17	LPQL	12	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP7	0.0-0.1	Fill	LPQL	LPQL	16	60	9	LPQL	15	31	36.4	5.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP8	0.0-0.1	Fill	6	LPQL	14	17	36	LPQL	10	71	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP9	0.15-0.35	Fill	4	LPQL	8	10	10	LPQL	7	27	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP10	0.0-0.2	Fill	7	LPQL	13	26	23	LPQL	14	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP11	0.0-0.1	Fill	LPQL	LPQL	13	30	14	LPQL	13	41	16.3	2.4	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP12	0.0-0.2	Fill	LPQL	LPQL	10	13	8	LPQL	16	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP13	0.0-0.2	Fill	7	LPQL	19	39	22	LPQL	14	50	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP14	0.0-0.2	Fill	5	LPQL	9	18	16	LPQL	8	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	**Chrysotile asbestos detected**
TP15	0.0-0.2	Fill	5	0.9	11	21	19	LPQL	12	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP16	0.0-0.2	Fill	LPQL	LPQL	6	31	16	LPQL	8	31	3.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP17	0.2-0.4	Fill	LPQL	LPQL	10	24	26	LPQL	6	38	1.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP18	0.0-0.2	Fill	7	LPQL	17	10	28	LPQL	9	26	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP19	0.1-0.3	Fill	LPQL	LPQL	6	8	7	LPQL	4	19	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP20	1.0-1.1	Natural	5	LPQL	11	17	20	LPQL	10	34	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP21	0.0-0.1	Fill	LPQL	LPQL	19	58	8	LPQL	12	30	44.4	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP22	0.0-0.2	Fill	5	LPQL	16	14	28	LPQL	10	54	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP23	0.1-0.25	Fill	LPQL	LPQL	13	22	18	LPQL	10	41	2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP24	0.0-0.05	Fill	LPQL	LPQL	19	38	10	LPQL	15	40	12.73	1.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP25	0.4-0.6	Fill	LPQL	LPQL	6	7	8	LPQL	5	21	5.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP26	0.2-0.4	Fill	LPQL	LPQL	8	13	7	LPQL	5	19	0.46	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP27	0.0-0.15	Fill	LPQL	LPQL	14	60	9	LPQL	15	32	57.3	7.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP28	0.0-0.2	Fill	6	LPQL	11	21	22	LPQL	12	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP29	0.0-0.2	Fill	LPQL	LPQL	15	15	25	LPQL	11	53	14.36	1.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP30	0.4-0.6	Natural	5	LPQL	14	27	19	LPQL	10	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP31	0.0-0.2	Fill	LPQL	LPQL	11	23	19	LPQL	9	46	19.1	2.7	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP32	0.0-0.2	Fill	6	LPQL	12	19	18	LPQL	11	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP33	0.0-0.2	Fill	6	LPQL	13	21	20	LPQL	12	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
Total Number of Samples			43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	39
Maximum Value			12	0.9	20	60	36	LPQL	18	71	58.2	7.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	**Chrysotile, Amosite & Crocidolite asbestos detected**

Explanation:

1 - Site Assessment Criteria (SAC): NEPM 2013, HIL-D: 'Commercial/Industrial'

2 - The results are for Total Chromium which includes Chromium III and VI. For initial screening purposes, we have assumed that the samples contain only Chromium VI unless demonstrated otherwise by additional analysis.

3 - B(a)P TEQ - Benzo(a)pyrene Toxicity Equivalence Quotient has been calculated based on 8 carcinogenic PAHs and their Toxic Equivalence Factors (TEFs) outlined in NEPM 2013

Concentration above the SAC **VALUE**

Abbreviations:

PAHs: Polycyclic Aromatic Hydrocarbons
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
LPQL: Less than PQL
OPP: Organophosphorus Pesticides
OCP: Organochlorine Pesticides
PCBs: Polychlorinated Biphenyls
UCL: Upper Level Confidence Limit on Mean Value
HILs: Health Investigation Levels
NA: Not Analysed
NC: Not Calculated
NSL: No Set Limit
SAC: Site Assessment Criteria
NEPM: National Environmental Protection Measure

TABLE B
SOIL LABORATORY RESULTS COMPARED TO HSLs
All data in mg/kg unless stated otherwise

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID [2]
PQL - Envirolab Services					25	50	0.2	0.5	1	3	1	
HSL Land Use Category [1]					COMMERCIAL/INDUSTRIAL							
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**								
NS1	0.5	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
NS2	0.5	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
NS3	0.5	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
NS4	0.5	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
CS1	1	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
CS2	1	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
CS3	1	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
CS4	1.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
CS5	1	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
CS6	1	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP2	0.0-0.1	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP3	0.25-0.45	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP4	0.0-0.25	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP5	0.0-0.1	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP7	0.0-0.1	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP8	0.0-0.1	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP9	0.15-0.35	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP10	0.0-0.2	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP11	0.0-0.1	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP12	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP13	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP14	0.0-0.2	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP15	0.0-0.2	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP16	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP17	0.2-0.4	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP18	0.0-0.2	Fill	0m to < 1m	clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP19	0.1-0.3	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP21	0.0-0.1	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP22	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP23	0.1-0.25	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP24	0.0-0.05	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP25	0.4-0.6	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP26	0.2-0.4	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP27	0.0-0.15	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP28	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP29	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP31	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP32	0.0-0.2	Fill	0m to < 1m	sand	LPQL	52	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP33	0.0-0.2	Fill	0m to < 1m	sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
Total Number of Samples					39	39	39	39	39	39	39	39
Maximum Value					LPQL	52	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL

Explanation:

1 - Site Assessment Criteria (SAC): NEPM 2013
2 - Field PID values obtained during the investigation

Concentration above the SAC **VALUE**
The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below

Abbreviations:

UCL: Upper Level Confidence Limit on Mean Value	NC: Not Calculated	PQL: Practical Quantitation Limit
HSLs: Health Screening Levels	NL: Not Limiting	LPQL: Less than PQL
NA: Not Analysed	SAC: Site Assessment Criteria	NEPM: National Environmental Protection Measure

SITE ASSESSMENT CRITERIA

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
PQL - Envirolab Services					25	50	0.2	0.5	1	3	1
HSL Land Use Category [1]					COMMERCIAL/INDUSTRIAL						
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**							
NS1	0.5	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
NS2	0.5	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
NS3	0.5	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
NS4	0.5	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
CS1	1	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
CS2	1	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
CS3	1	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
CS4	1.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
CS5	1	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
CS6	1	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP2	0.0-0.1	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP3	0.25-0.45	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP4	0.0-0.25	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP5	0.0-0.1	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP7	0.0-0.1	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP8	0.0-0.1	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP9	0.15-0.35	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP10	0.0-0.2	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP11	0.0-0.1	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP12	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP13	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP14	0.0-0.2	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP15	0.0-0.2	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP16	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP17	0.2-0.4	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP18	0.0-0.2	Fill	0m to < 1m	clay	NL	NL	NL	NL	NL	NL	NL
TP19	0.1-0.3	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP21	0.0-0.1	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP22	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP23	0.1-0.25	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP24	0.0-0.05	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP25	0.4-0.6	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP26	0.2-0.4	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP27	0.0-0.15	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP28	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP29	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP31	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP32	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL
TP33	0.0-0.2	Fill	0m to < 1m	sand	NL	NL	NL	NL	NL	NL	NL

TABLE C
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES (2014)
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total PCBs	TRH					BTEX COMPOUNDS					ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful [2]	Total Scheduled [3]		C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_{10}-C_{36}	Benzene	Toluene	Ethyl benzene	Total Xylenes	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	25	50	100	100	250	0.2	0.5	1	3	100
General Solid Waste CT1 [1]			100	20	100	NSL	100	4	40	NSL	200	0.8	60	4	250	<50	<50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1 [1]			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	<50	<50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2 [1]			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	<50	<50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2 [1]			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	<50	<50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
NS1	0.5	Fill	8	LPQL	8	30	28	LPQL	6	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
NS1	0.5	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LPQL	NA	NA	NA	NA	**Chrysotile & Amosite asbestos detected**
NS2	0.5	Fill	LPQL	LPQL	8	17	25	LPQL	9	55	0.78	0.08	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
NS2	0.5	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LPQL	NA	NA	NA	NA	**Chrysotile, Amosite & Crocidolite asbestos detected**
NS3	0.5	Fill	4	LPQL	9	16	15	LPQL	5	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
NS4	0.5	Fill	5	LPQL	12	17	26	LPQL	9	66	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS1	1	Fill	6	LPQL	15	24	25	LPQL	12	59	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS1	1	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LPQL	NA	NA	NA	NA	**Chrysotile, Amosite & Crocidolite asbestos detected**
CS2	1	Fill	5	LPQL	14	20	18	LPQL	12	49	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS2	1	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LPQL	NA	NA	NA	NA	**Chrysotile & Amosite asbestos detected**
CS3	1	Fill	6	LPQL	15	22	20	LPQL	10	49	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS4	1.2	Fill	7	LPQL	18	29	21	LPQL	18	59	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS5	1	Fill	12	LPQL	15	33	28	LPQL	12	55	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
CS6	1	Fill	5	LPQL	14	38	36	LPQL	9	58	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
SS01	-	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LPQL	NA	NA	NA	NA	**Chrysotile & Amosite asbestos detected**
TP2	0.0-0.1	Fill	6	LPQL	12	23	16	LPQL	10	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP3	0.25-0.45	Fill	4	LPQL	9	13	13	LPQL	7	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP4	0.0-0.25	Fill	LPQL	LPQL	20	42	13	LPQL	16	33	58.2	**5.2**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	530	1100	1630	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP5	0.0-0.1	Fill	7	LPQL	15	27	25	LPQL	12	61	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP7	0.0-0.1	Fill	LPQL	LPQL	16	60	9	LPQL	15	31	36.4	**3.9**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	350	1000	1350	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP8	0.0-0.1	Fill	6	LPQL	14	17	36	LPQL	10	71	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	520	520	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP9	0.15-0.35	Fill	4	LPQL	8	10	10	LPQL	7	27	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP10	0.0-0.2	Fill	7	LPQL	13	26	23	LPQL	14	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP11	0.0-0.1	Fill	LPQL	LPQL	13	30	14	LPQL	13	41	16.3	**1.7**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	250	810	1060	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP12	0.0-0.2	Fill	LPQL	LPQL	10	13	8	LPQL	16	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP13	0.0-0.2	Fill	7	LPQL	19	39	22	LPQL	14	50	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP14	0.0-0.2	Fill	5	LPQL	9	18	16	LPQL	8	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	**Chrysotile asbestos detected**
TP15	0.0-0.2	Fill	5	0.9	11	21	19	LPQL	12	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP16	0.0-0.2	Fill	LPQL	LPQL	6	31	16	LPQL	8	31	3.1	0.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	220	220	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP17	0.2-0.4	Fill	LPQL	LPQL	10	24	26	LPQL	6	38	1.1	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	280	280	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP18	0.0-0.2	Fill	7	LPQL	17	10	28	LPQL	9	26	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP19	0.1-0.3	Fill	LPQL	LPQL	6	8	7	LPQL	4	19	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP21	0.0-0.1	Fill	LPQL	LPQL	19	58	8	LPQL	12	30	44.4	**4.4**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	560	1500	2060	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP22	0.0-0.2	Fill	5	LPQL	16	14	28	LPQL	10	54	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	110	110	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP23	0.1-0.25	Fill	LPQL	LPQL	13	22	18	LPQL	10	41	2	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP24	0.0-0.05	Fill	LPQL	LPQL	19	38	10	LPQL	15	40	12.73	**0.83**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	160	450	610	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP25	0.4-0.6	Fill	LPQL	LPQL	6	7	8	LPQL	5	21	5.2	0.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP26	0.2-0.4	Fill	LPQL	LPQL	8	13	7	LPQL	5	19	0.46	0.06	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP27	0.0-0.15	Fill	LPQL	LPQL	14	60	9	LPQL	15	32	57.3	**4.5**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	410	1000	1410	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP28	0.0-0.2	Fill	6	LPQL	11	21	22	LPQL	12	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP29	0.0-0.2	Fill	LPQL	LPQL	15	15	25	LPQL	11	53	14.36	**0.86**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP31	0.0-0.2	Fill	LPQL	LPQL	11	23	19	LPQL	9	46	19.1	**1.8**	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	170	410	580	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP32	0.0-0.2	Fill	6	LPQL	12	19	18	LPQL	11	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP33	0.0-0.2	Fill	6	LPQL	13	21	20	LPQL	12	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
Total Number of samples			39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	44	39	39	39	39	39
Maximum Value			12	0.9	20	60	36	LPQL	18	71	58.2	5.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	560	1500	2060	LPQL	LPQL	LPQL	LPQL	**Chrysotile, Amosite & Crocidolite asbestos detected**

Explanation:

[1] - NSW EPA Waste Classification Guidelines (2014)

[2] - Assessment of Total Moderately Harmful pesticides includes: Dichlorovos, Dimethoate, Fenitrothion, Ethion, Malathion and Parathion

[3] - Assessment of Total Scheduled pesticides include: HBC, alpha-BHC, gamma-BHC, beta-BHC, Heptachlor, Aldrin, Heptachlor Epoxide, gamma-Chlordane, alpha-chlordane, pp-DDE, Dieldrin, Endrin, pp-DDD, pp-DDT, Endrin Aldehyde

Concentration above the CT1 — **VALUE**
Concentration above SCC1 — **VALUE**
Concentration above the SCC2 — **VALUE**

Abbreviations:

PAHs: Polycyclic Aromatic Hydrocarbons
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
LPQL: Less than PQL
PID: Photoionisation Detector
PCBs: Polychlorinated Biphenyls
UCL: Upper Level Confidence Limit on Mean Value
NA: Not Analysed
NC: Not Calculated
NSL: No Set Limit
SAC: Site Assessment Criteria
TRH: Total Recoverable Hydrocarbons
CT: Contaminant Threshold
SCC: Specific Contaminant Concentration
HILs: Health Investigation Levels
NEPM: National Environmental Protection Measure
BTEX: Monocyclic Aromatic Hydrocarbons

TABLE D
SOIL LABORATORY TCLP RESULTS
All data in mg/L unless stated otherwise

			B(a)P
PQL - Envirolab Services			0.001
TCLP1 - General Solid Waste [1]			0.04
TCLP2 - Restricted Solid Waste [1]			0.16
TCLP3 - Hazardous Waste [1]			>0.16
Sample Reference	**Sample Depth**	**Sample Description**	
TP4	0.0-0.25	Fill	LPQL
TP7	0.0-0.1	Fill	LPQL
TP11	0.0-0.1	Fill	LPQL
TP21	0.0-0.1	Fill	LPQL
TP24	0.0-0.05	Fill	LPQL
TP27	0.0-0.15	Fill	LPQL
TP29	0.0-0.2	Fill	LPQL
TP31	0.0-0.2	Fill	LPQL
Total Number of samples			8
Maximum Value			LPQL

Explanation:

1 - NSW EPA Waste Classification Guidelines (2014)

General Solid Waste	**VALUE**
Restricted Solid Waste	**VALUE**
Hazardous Waste	**VALUE**

Abbreviations:

PQL: Practical Quantitation Limit
LPQL: Less than PQL
B(a)P: Benzo(a)pyrene
NC: Not Calculated
NA: Not Analysed
TCLP: Toxicity Characteristics Leaching Procedure

TABLE E
SOIL LABORATORY RESULTS COMPARED TO EILs AND ESLs
All data in mg/kg unless stated otherwise

Land Use Category [1]					COMMERCIAL/INDUSTRIAL																
					AGED HEAVY METALS-EILs						EILs		ESLs								
			pH	CEC (cmol$_c$/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services			-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05
Ambient Background Concentration (ABC) [2]			-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																			
NS1	0.5	Fill	Coarse	NA	NA	NA	8	8	30	28	6	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
NS2	0.5	Fill	Coarse	NA	NA	NA	LPQL	8	17	25	9	55	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.08
NS3	0.5	Fill	Coarse	NA	NA	NA	4	9	16	15	5	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
NS4	0.5	Fill	Coarse	NA	NA	NA	5	12	17	26	9	66	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
CS1	1	Fill	Coarse	NA	NA	NA	6	15	24	25	12	59	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
CS2	1	Fill	Coarse	NA	NA	NA	5	14	20	18	12	49	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
CS3	1	Fill	Coarse	NA	NA	NA	6	15	22	20	10	49	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
CS4	1.2	Fill	Coarse	NA	NA	NA	7	18	29	21	18	59	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
CS5	1	Fill	Coarse	NA	NA	NA	12	15	33	28	12	55	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
CS6	1	Fill	Fine	NA	NA	NA	5	14	38	36	9	58	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP2	0.0-0.1	Fill	Fine	NA	NA	NA	6	12	23	16	10	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP3	0.25-0.45	Fill	Coarse	NA	NA	NA	4	9	13	13	7	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP4	0.0-0.25	Fill	Coarse	NA	NA	NA	LPQL	20	42	13	16	33	0.1	LPQL	LPQL	LPQL	1300	1200	LPQL	LPQL	LPQL	5.2
TP5	0.0-0.1	Fill	Fine	NA	NA	NA	7	15	27	25	12	61	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP7	0.0-0.1	Fill	Coarse	NA	NA	NA	LPQL	16	60	9	15	31	LPQL	LPQL	LPQL	LPQL	1000	1200	LPQL	LPQL	LPQL	3.8
TP8	0.0-0.1	Fill	Fine	NA	NA	NA	6	14	17	36	10	71	LPQL	LPQL	LPQL	LPQL	500	400	LPQL	LPQL	LPQL	LPQL
TP9	0.15-0.35	Fill	Fine	NA	NA	NA	4	8	10	10	7	27	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP10	0.0-0.2	Fill	Fine	NA	NA	NA	7	13	26	23	14	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP11	0.0-0.1	Fill	Fine	NA	NA	NA	LPQL	13	30	14	13	41	LPQL	LPQL	LPQL	LPQL	780	1000	LPQL	LPQL	LPQL	1.7
TP12	0.0-0.2	Fill	Coarse	NA	NA	NA	LPQL	10	13	8	16	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP13	0.0-0.2	Fill	Coarse	NA	NA	NA	7	19	39	22	14	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP14	0.0-0.2	Fill	Fine	NA	NA	NA	5	9	18	16	8	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP15	0.0-0.2	Fill	Fine	NA	NA	NA	5	11	21	19	12	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP16	0.0-0.2	Fill	Coarse	NA	NA	NA	LPQL	6	31	16	8	31	LPQL	LPQL	LPQL	LPQL	200	300	LPQL	LPQL	LPQL	0.3
TP17	0.2-0.4	Fill	Coarse	NA	NA	NA	LPQL	10	24	26	6	38	LPQL	LPQL	LPQL	LPQL	170	480	LPQL	LPQL	LPQL	0.1
TP18	0.0-0.2	Fill	Fine	NA	NA	NA	7	17	10	28	9	26	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP19	0.1-0.3	Fill	Coarse	NA	NA	NA	LPQL	6	8	7	4	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP21	0.0-0.1	Fill	Coarse	NA	NA	NA	LPQL	19	58	8	12	30	LPQL	LPQL	LPQL	LPQL	1600	1700	LPQL	LPQL	LPQL	4.4
TP22	0.0-0.2	Fill	Coarse	NA	NA	NA	5	16	14	28	10	54	LPQL	LPQL	LPQL	LPQL	110	LPQL	LPQL	LPQL	LPQL	LPQL
TP23	0.1-0.25	Fill	Coarse	NA	NA	NA	LPQL	13	22	18	10	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.1
TP24	0.0-0.05	Fill	Coarse	NA	NA	NA	LPQL	19	38	10	15	40	LPQL	LPQL	LPQL	LPQL	420	680	LPQL	LPQL	LPQL	0.83
TP25	0.4-0.6	Fill	Coarse	NA	NA	NA	LPQL	6	7	8	5	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.3
TP26	0.2-0.4	Fill	Coarse	NA	NA	NA	LPQL	8	13	7	5	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.06
TP27	0.0-0.15	Fill	Coarse	NA	NA	NA	LPQL	14	60	9	15	32	LPQL	LPQL	LPQL	LPQL	1100	1200	LPQL	LPQL	LPQL	4.5
TP28	0.0-0.2	Fill	Coarse	NA	NA	NA	6	11	21	22	12	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
TP29	0.0-0.2	Fill	Coarse	NA	NA	NA	LPQL	15	15	25	11	53	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.86
TP31	0.0-0.2	Fill	Coarse	NA	NA	NA	LPQL	11	23	19	9	46	LPQL	LPQL	LPQL	LPQL	450	620	LPQL	LPQL	LPQL	1.8
TP32	0.0-0.2	Fill	Coarse	NA	NA	NA	6	12	19	18	11	33	LPQL	LPQL	LPQL	LPQL	100	LPQL	LPQL	LPQL	LPQL	LPQL
TP33	0.0-0.2	Fill	Coarse	NA	NA	NA	6	13	21	20	12	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
Total Number of Samples				0	0	0	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Maximum Value				NC	NC	NC	12	20	60	36	18	71	0.1	LPQL	LPQL	LPQL	1300	1200	LPQL	LPQL	LPQL	5.2

Explanation:
1 - Site Assessment Criteria (SAC): NEPM 2013
2 - ABC Values for selected metals has been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for old suburbs with high traffic have been quoted)

Concentration above the SAC VALUE
The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

Abbreviations:
EILs: Ecological Investigation Levels
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
UCL: Upper Level Confidence Limit on Mean Value
ESLs: Ecological Screening Levels
NA: Not Analysed
LPQL: Less than PQL
SAC: Site Assessment Criteria
NEPM: National Environmental Protection Measure
NC: Not Calculated
NSL: No Set Limit
ABC: Ambient Background Concentration

EIL AND ESL ASSESSMENT CRITERIA

Land Use Category [1]					COMMERCIAL/INDUSTRIAL																
					AGED HEAVY METALS-EILs						EILs		ESLs								
			pH	CEC (cmol$_c$/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services			-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05
Ambient Background Concentration (ABC) [2]			-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																			
NS1	0.5	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
NS2	0.5	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
NS3	0.5	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
NS4	0.5	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
CS1	1	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
CS2	1	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
CS3	1	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
CS4	1.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
CS5	1	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
CS6	1	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP2	0.0-0.1	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP3	0.25-0.45	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP4	0.0-0.25	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP5	0.0-0.1	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP7	0.0-0.1	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP8	0.0-0.1	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP9	0.15-0.35	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP10	0.0-0.2	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP11	0.0-0.1	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP12	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP13	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP14	0.0-0.2	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP15	0.0-0.2	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP16	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP17	0.2-0.4	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP18	0.0-0.2	Fill	Fine	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	2500	6600	95	135	185	95	1.4
TP19	0.1-0.3	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP21	0.0-0.1	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP22	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP23	0.1-0.25	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP24	0.0-0.05	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP25	0.4-0.6	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP26	0.2-0.4	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP27	0.0-0.15	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP28	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP29	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP31	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP32	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4
TP33	0.0-0.2	Fill	Coarse	NA	NA	NA	160	323	113	1963	60	232	370	640	215	170	1700	3300	75	135	165	180	1.4

TABLE F
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP33 (0.0-0.2)	Arsenic	4	6	7	6.5	15
Dup Ref = DUPKT1	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	13	14	13.5	7
Envirolab Report: 147823	Copper	1	21	22	21.5	5
	Lead	1	20	22	21.0	10
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	12	12	12.0	0
	Zinc	1	33	40	36.5	19
	Naphthalene	0.1	LPQL	LPQL	NC	NC
	Acenaphthylene	0.1	LPQL	LPQL	NC	NC
	Acenaphthene	0.1	LPQL	LPQL	NC	NC
	Fluorene	0.1	LPQL	LPQL	NC	NC
	Phenanthrene	0.1	LPQL	LPQL	NC	NC
	Anthracene	0.1	LPQL	LPQL	NC	NC
	Fluoranthene	0.1	LPQL	LPQL	NC	NC
	Pyrene	0.1	LPQL	LPQL	NC	NC
	Benzo(a)anthracene	0.1	LPQL	LPQL	NC	NC
	Chrysene	0.1	LPQL	LPQL	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	LPQL	LPQL	NC	NC
	Benzo(a)pyrene	0.05	LPQL	LPQL	NC	NC
	Indeno(123-cd)pyrene	0.1	LPQL	LPQL	NC	NC
	Dibenzo(ah)anthracene	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	LPQL	LPQL	NC	NC
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total OCPs	0.1	LPQL	LPQL	NC	NC
	Total PCBs	0.1	LPQL	LPQL	NC	NC
	TRH C_6-C_{10} (F1)	25	LPQL	LPQL	NC	NC
	TRH >C_{10}-C_{16} (F2)	50	LPQL	LPQL	NC	NC
	TRH >C_{16}-C_{34} (F3)	100	LPQL	LPQL	NC	NC
	TRH >C_{34}-C_{40} (F4)	100	LPQL	LPQL	NC	NC
	Benzene	0.5	LPQL	LPQL	NC	NC
	Toluene	0.5	LPQL	LPQL	NC	NC
	Ethylbenzene	1	LPQL	LPQL	NC	NC
	m+p-xylene	2	LPQL	LPQL	NC	NC
	o-xylene	1	LPQL	LPQL	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

Abbreviations:

PQL: Practical Quantitation Limit
LPQL: Less than PQL
NA: Not Analysed
NC: Not Calculated
OCP: Organochlorine Pesticides
OPP: Organophosphorus Pesticides
PCBs: Polychlorinated Biphenyls
TRH: Total Recoverable Hydrocarbons

TABLE F
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP2 (0.0-0.1)	Arsenic	4	6	6	6.0	0
Dup Ref = DUPKT3	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	12	12	12.0	0
Envirolab Report: 147823	Copper	1	23	23	23.0	0
	Lead	1	16	19	17.5	17
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	10	11	10.5	10
	Zinc	1	37	38	37.5	3
	Naphthalene	0.1	LPQL	LPQL	NC	NC
	Acenaphthylene	0.1	LPQL	LPQL	NC	NC
	Acenaphthene	0.1	LPQL	LPQL	NC	NC
	Fluorene	0.1	LPQL	LPQL	NC	NC
	Phenanthrene	0.1	LPQL	LPQL	NC	NC
	Anthracene	0.1	LPQL	LPQL	NC	NC
	Fluoranthene	0.1	LPQL	LPQL	NC	NC
	Pyrene	0.1	LPQL	LPQL	NC	NC
	Benzo(a)anthracene	0.1	LPQL	LPQL	NC	NC
	Chrysene	0.1	LPQL	LPQL	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	LPQL	LPQL	NC	NC
	Benzo(a)pyrene	0.05	LPQL	LPQL	NC	NC
	Indeno(123-cd)pyrene	0.1	LPQL	LPQL	NC	NC
	Dibenzo(ah)anthracene	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	LPQL	LPQL	NC	NC
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total OCPs	0.1	LPQL	LPQL	NC	NC
	Total OPPs	0.1	LPQL	LPQL	NC	NC
	Total PCBs	0.1	LPQL	LPQL	NC	NC
	TRH C_6-C_{10} (F1)	25	LPQL	LPQL	NC	NC
	TRH >C_{10}-C_{16} (F2)	50	LPQL	LPQL	NC	NC
	TRH >C_{16}-C_{34} (F3)	100	LPQL	LPQL	NC	NC
	TRH >C_{34}-C_{40} (F4)	100	LPQL	LPQL	NC	NC
	Benzene	0.5	LPQL	LPQL	NC	NC
	Toluene	0.5	LPQL	LPQL	NC	NC
	Ethylbenzene	1	LPQL	LPQL	NC	NC
	m+p-xylene	2	LPQL	LPQL	NC	NC
	o-xylene	1			#DIV/0!	#DIV/0!

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

Abbreviations:

PQL: Practical Quantitation Limit
LPQL: Less than PQL
NA: Not Analysed
NC: Not Calculated
OCP: Organochlorine Pesticides
OPP: Organophosphorus Pesticides
PCBs: Polychlorinated Biphenyls
TRH: Total Recoverable Hydrocarbons

TABLE G
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab WA PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP12 (0.0-0.2)	Arsenic	4	4	LPQL	LPQL	NC	NC
Dup Ref = DUPKT2	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	10	11	10.5	10
Envirolab Report: 147823	Copper	1	1	13	18	15.5	32
Envirolab VIC Report: 181575	Lead	1	1	8	8	8.0	0
	Mercury	0.1	0.1	LPQL	LPQL	NC	NC
	Nickel	1	1	16	21	18.5	27
	Zinc	1	1	25	27	26.0	8
	Naphthalene	0.1	0.1	LPQL	LPQL	NC	NC
	Acenaphthylene	0.1	0.1	LPQL	LPQL	NC	NC
	Acenaphthene	0.1	0.1	LPQL	LPQL	NC	NC
	Fluorene	0.1	0.1	LPQL	LPQL	NC	NC
	Phenanthrene	0.1	0.1	LPQL	LPQL	NC	NC
	Anthracene	0.1	0.1	LPQL	LPQL	NC	NC
	Fluoranthene	0.1	0.1	LPQL	LPQL	NC	NC
	Pyrene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(a)anthracene	0.1	0.1	LPQL	LPQL	NC	NC
	Chrysene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	LPQL	LPQL	NC	NC
	Benzo(a)pyrene	0.05	0.05	LPQL	LPQL	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	LPQL	LPQL	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(a)pyrene TEQ	0.5	0.5	LPQL	LPQL	NC	NC
	Total OCPs	0.1	0.1	LPQL	LPQL	NC	NC
	Total OPPs	0.1	0.1	LPQL	LPQL	NC	NC
	Total PCBs	0.1	0.1	LPQL	LPQL	NC	NC
	TRH C6-C10 (F1)	25	25	LPQL	LPQL	NC	NC
	TRH >C10-C16 (F2)	50	50	LPQL	LPQL	NC	NC
	TRH >C16-C34 (F3)	100	100	LPQL	LPQL	NC	NC
	TRH >C34-C40 (F4)	100	100	LPQL	LPQL	NC	NC
	Benzene	0.5	0.5	LPQL	LPQL	NC	NC
	Toluene	0.5	0.5	LPQL	LPQL	NC	NC
	Ethylbenzene	1	1	LPQL	LPQL	NC	NC
	m+p-xylene	2	2	LPQL	LPQL	NC	NC
	o-xylene	1	1			#DIV/0!	#DIV/0!

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

Abbreviations:

PQL: Practical Quantitation Limit
LPQL: Less than PQL
NA: Not Analysed
NC: Not Calculated
OCP: Organochlorine Pesticides
OPP: Organophosphorus Pesticides
PCBs: Polychlorinated Biphenyls
TRH: Total Recoverable Hydrocarbons

TABLE H

SUMMARY OF FIELD QA/QC RESULTS

ANALYSIS	Envirolab PQL		TB1[S] 3/06/2016 147823	TS1[S] 3/06/2016 147823
	mg/kg	µg/L	mg/kg	% Recovery
Benzene	1	1	LPQL	96
Toluene	1	1	LPQL	96
Ethylbenzene	1	1	LPQL	97
m+p-xylene	2	2	LPQL	98
o-xylene	1	1	LPQL	98

Explanation:

[W] Sample type (water)

[S] Sample type (sand)

BTEX concentrations in trip spikes are presented as % recovery

Values above PQLs/Acceptance criteria **VALUE**

Abbreviations:

PQL: Practical Quantitation Limit

LPQL: Less than PQL

NA: Not Analysed

NC: Not Calculated

TB: Trip Blank

TS: Trip Spike

RS: Rinsate Sample

TRH: Total Recoverable Hydrocarbons

Appendix A: Site Information including Site History

EIS

Land Title Records

ADVANCE LEGAL SEARCH PTY LIMITED

(ACN 077 067 068)
ABN 49 077 067 068

PO Box 149
Yagoona NSW 2199

Telephone: +61 9644 1679
Mobile: 0412 169 809
Facsimile: +61 8076 3026
Email:alsearch@optusnet.com.au

30th May 2016

ENVIRONMENTAL INVESTIGATION SERVICES
PO Box 976
NORTH RYDE BC NSW 1670

Attention: Katrina Taylor

RE: **7 Montore Road,**
Minto
Job Ref: E29448K

Current Search

Folio Identifier 52/618900 (attached)
DP 618900 (plan attached)
Dated 25th May 2016
Registered Proprietor:
CAMOLAW PTY LIMITED

Title Tree
Lot 52 DP 618900

Folio Identifier 52/618900

Certificate of Title Volume 14530 Folio 131

Certificate of Title Volume 13577 Folio 43

Certificate of Title Volume 12432 Folio 135 & 136

Certificate of Title Volume 12084 Folio 32

Certificate of Title Volume 11924 Folio 182

Certificate of Title Volume 11276 Folio's 219 & 220

Certificate of Title Volume 11132 Folio 59

PA 46912

Conveyance Book 1599 No 886

Conveyance Book 1191 No 976

Conveyance Book 637 No 150

***

Summary of Proprietors
Lot 52 DP 618900

Year	Proprietor
	(Lot 52 DP 618900)
2012 – todate	Camolaw Pty Limited
2002 – 2012	Foamco Industries Pty Limited
1989 – 2002	M. J. Welsh Pty Limited
1988 – 1989	Director, Macarthur Growth Area
	(Lot 52DP 618900 – CTVol 14530 Fol 131)
1985 – 1988	Director, Macarthur Growth Area
1981 – 1985	Minister Administering the Environmental Planning and Assessment Act, 1979
	(Lot 5 DP 255724 – CTVol 13577 Fol 43)
1978 – 1981	NSW Planning and Environment Commission
	(Lot 13 & 14 DP 566245 – CTVol 12432 Fol's 135 & 136)
1974 – 1978	The State Planning Authority of New South Wales
	(Lot 11 DP 559867 – CT Vol 12084 Fol 32)
1973 – 1974	The State Planning Authority of New South Wales
	(Lot 1 DP 243426 – CT Vol 11924 Fol 182)
1972 – 1973	The State Planning Authority of New South Wales
	(Lot 1 DP 238859 – CT Vol 11276 Fol 219 & 220)
1970 – 1972	The State Planning Authority of New South Wales
	(Lot 1 DP 534676 – Area 491 Acres 3 Roods 4 ½ Perches – CT Vol 11132 Fol 59)
1969 – 1970	The State Planning Authority of New South Wales
	(Part Portions 101 & 113, Parish St Peters and other lands – Area 102 Acres 2 Roods 35 Perches – Conv Bk 1599 No 886)
1930 – 1969	John Reginald Warner, dairyman
	(Part Portions 101 & 113, Parish St Peters and other lands – Area 102 Acres 2 Roods 35 Perches – Conv Bk 1191 No 976)
1920 – 1930	Arthur Edward Blain, dairyman
	Part Portions 101 & 113, Parish St Peters and other lands – Area 102 Acres 2 Roods 35 Perches – Conv Bk 637 No 150)
1899 – 1920	James Kershler, farmer Arthur Edward Kershler, farmer

****

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
25/5/2016 2:48PM

FOLIO: 52/618900

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 14530 FOL 131

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
12/9/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
6/10/1989	Y635012	TRANSFER	
6/10/1989	Y635013	MORTGAGE	EDITION 1
11/12/1997	3657283	DISCHARGE OF MORTGAGE	
11/12/1997	3657284	MORTGAGE	EDITION 2
1/3/1999	5634817	VARIATION OF MORTGAGE	EDITION 3
15/1/2002	8271473	DISCHARGE OF MORTGAGE	
15/1/2002	8271474	TRANSFER	
15/1/2002	8271475	MORTGAGE	EDITION 4
3/5/2007	AD90779	DISCHARGE OF MORTGAGE	
3/5/2007	AD90780	MORTGAGE	EDITION 5
23/4/2009	AE627739	DISCHARGE OF MORTGAGE	EDITION 6
14/3/2011	AG116701	MORTGAGE	EDITION 7
5/6/2012	AH27783	CAVEAT	
28/8/2012	AH201724	DISCHARGE OF MORTGAGE	
28/8/2012	AH201725	TRANSFER	EDITION 8

*** END OF SEARCH ***

PLAN FORM 1

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

D.P.618900

*OFFICE USE ONLY

Council Clerk's Certificate

I hereby certify that —

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

*(b) the requirements of section 34B of the †Metropolitan Water, Sewerage, and Drainage Act, 1924, as amended. †Hunter District Water, Sewerage, and Drainage Act, 1938, as amended.

have been complied with by the applicant in relation to the proposed .... (Insert "new road", "subdivision" or "consolidated lot") set out herein.

Subdivision No. ....

Date ....

(Signature) .... Council Clerk

*This part of certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the area of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board.
†Delete if inapplicable.

Surveyor's Certificate

I, JOHN SELWYN McDONALD OF JOHN M. DALY & ASSOCIATES of 135-141 QUEEN STREET, CAMPBELLTOWN a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that ~~the survey represented in~~ this plan WAS COMPILED FROM D.P.255724 is accurate ~~and has been made~~ *(1) by me (2) under my immediate supervision in accordance with the Survey Practice Regulations, 1933,~~ and was completed on † 3RD JULY 1981

Signature [signature]

Surveyor registered under Surveyors Act, 1929, as amended.
Datum Line of Azimuth.
*Strike out either (1) or (2). †Insert date of survey.

PLAN OF SUBDIVISION OF LOT 5 IN D.P. 255724

~~Mun/Shire~~ City: CAMPBELLTOWN

Locality: MINTO

Parish: ST. PETER

County: CUMBERLAND

Reduction Ratio 1: 1250

Lengths are in metres

D.P. 618900

Registered: [seal] P.M. 26-8-1981

C.A.: ....

Title System: TORRENS

Purpose: SUBDIVISION

Ref. Map: U8230-4#

Last Plan: D.P. 255724

B 1 A 2 0 0 N

Signatures, seals and statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

Signed by me ... the Minister administering the Environmental Planning and Assessment Act, 1979 and hereby certify that I have no notice of the revocation of such delegation.

[signature]

D.P.618900

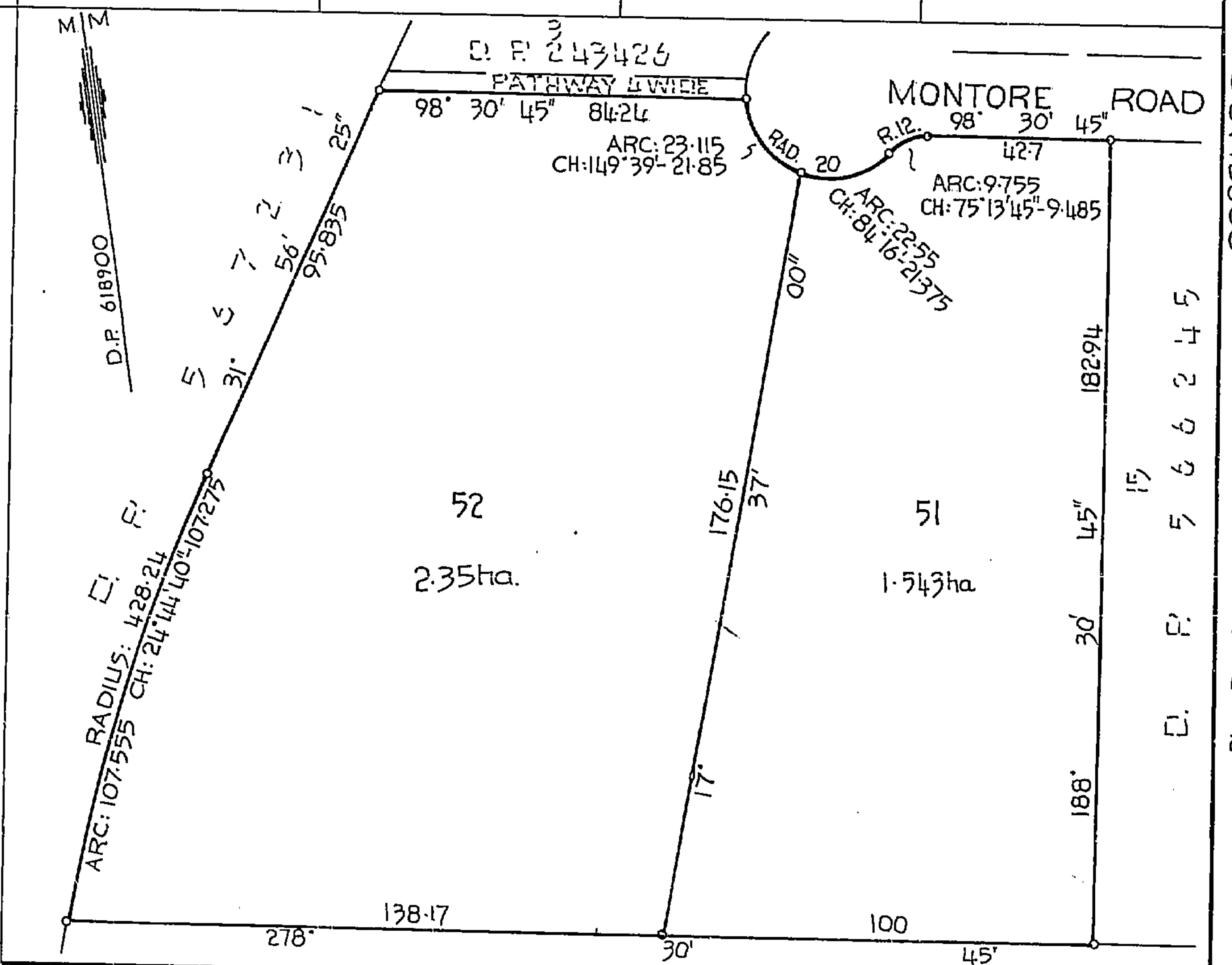


Table of mm	10	20	30	40	50	60	100	110	120	130	140	150	160	170

M. P. D.

SURVEYOR'S REFERENCE 81/241

Plan Drawing only to appear in this space

Plan Drawing only to appear in this space

I, Bruce Richard Davies, Under Secretary for Lands and Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this day.

[signature]

28th August, 1981

Table of mm	10	20	30	40	50	60	70	80	90	100	110	120	130	140

Licence: 98M111
Edition: 0011

(1)

TRANSFER

New South Wales
Real Property Act 1900

8271474J

1

PRIVACY NOTE: this information is legally required and w

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
09-10-2001 0000768510-001
SECTION 18(2)
DUTY $ **********2.00

(A) **TORRENS TITLE**

If appropriate, specify the part transferred

Folio 52/618900

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODES
374	WBC Reference (optional): 82844418/G3	T TW (Sheriff)

(C) **TRANSFEROR**

M.J. WELSH PTY. LIMITED ACN 002 309 239

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 1,585,000.00 and as regards

(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple.

(F) **SHARE TRANSFERRED** WHOLE

(G) Encumbrances (if applicable): 1. 2. 3.

(H) **TRANSFEREE**

FOAMCO INDUSTRIES PTY LIMITED ACN 003 666 340

(I) **TENANCY:**

DATE ..../..../....
dd mm yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Common
M. J. WELSH
PTY. LIMITED
A.C.N. 002 309 239
Seal

Signature of witness:

Name of witness:

Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:

DIR
MICHAEL WELSH
SEC.
TINA WELSH

I certify that the transferee, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness:

Name of witness:

Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the transferee.

Signature of transferee:
Chris Balomatis
Solicitor.

If signed on the transferee's behalf by a solicitor or licensed conveyancer, insert the signatory's full name and capacity below:

All handwriting must be in block capitals.

A set of notes on this form (01T-2) is available from Land and Property Information NSW.

[redacted]

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

12432136

Appln. Nos.19331 & 46912

For Crown Grants see Schedule.

Prior Title Vol.12084 Fol. 32

Vol. 12432 Fol. 136

Edition issued 19-4-1974

[redacted] R

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

REGISTRAR GENERAL NEW SOUTH WALES

(Page 1) Vol. 12432 Fol. 136

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in the land set out in the Schedule hereunder at Minto in the City of Campbelltown Parishes of Minto and St.Peter and County of Cumberland.

SCHEDULE OF GRANTS

Lot and Deposited Plan	Parish	Number of Portion	Name of Grantee	Date of Grant
Lot 13 in D.P.566245	Minto	Pt 35	John Pendergast	20-6-1816
	Minto	Pt 36	Edward Myles	20-6-1816
	St.Peter	Pt 101	Sarah Byrne	20-6-1816
	St.Peter	Pt 163	Thomas Rose	3-9-1821
	Minto & St.Peter	Pt of Bed of Bow Bowing Creek	For which no Crown Grant has issued.	

FIRST SCHEDULE

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

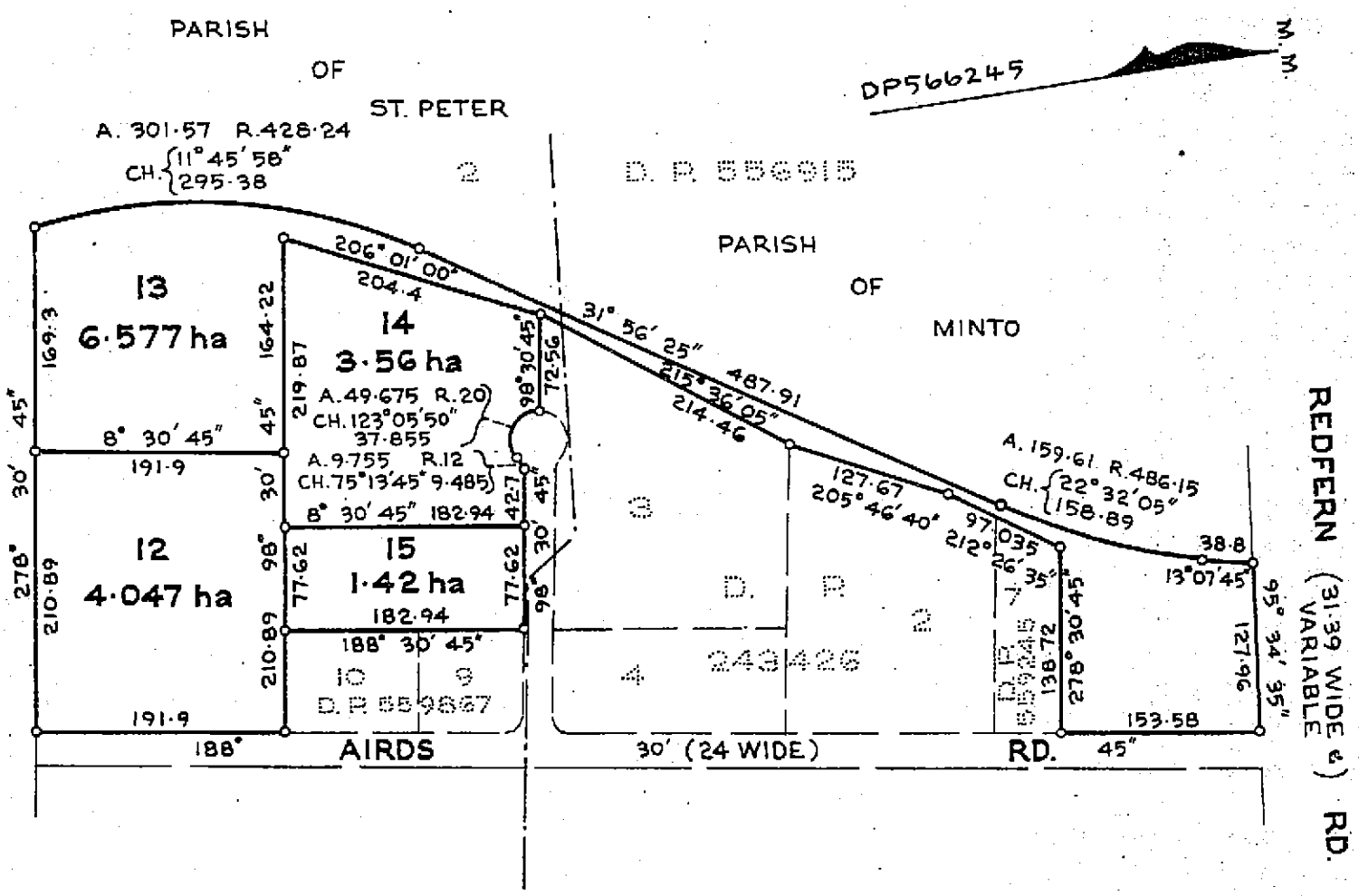
SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.

Vol. 12432 Fol. 136

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



DP 255724
M.23-2-78
0840760 M.E.
20.7.83

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This deed is cancelled as to whole exc road New Certificates of Title have issued on 28/3/78 for lots in Deposited Plan No. 255724 as follows:- Lots 1-7 Vol. 13577 Fol. 39-45 respectively. REGISTRAR GENERAL	NEW CERTIFICATE(S) OF TITLE ISSUING ON DP255724 NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH				

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
			Interest of the Council of the City of Campbelltown in the road widening shown on D.P. 255724	23.2.1978				
			The residue of land in this folio comprised road. Registered 28-3-78 REGISTRAR GENERAL					

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Vol. 12432 Fol. 136

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
NATURE	NUMBER	DATE				

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]ICATE OF TITLE

NEW SOUTH WALES

[redacted] PROPERTY ACT, 1900

Vol. 12432 Fol. 135

Appln No.46912

Prior Title Vol.12084 Fol.32

Edition issued 19-4-1974.

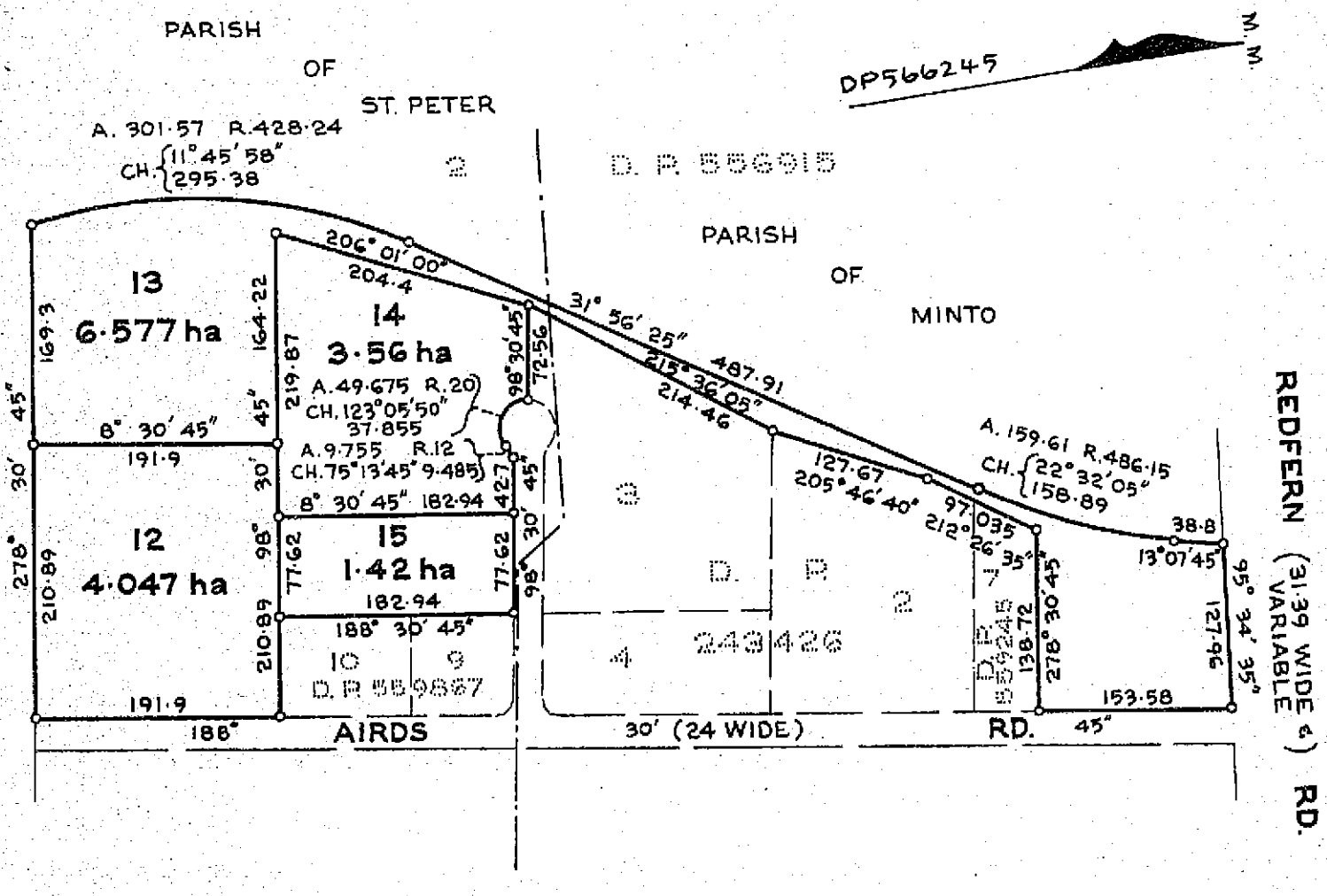
CANCELLED R

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 14 in Deposited Plan 566245 at Minto in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 101 granted to Sarah Byrne on 20-6-1816, Portion 163 granted to Thomas Rose on 3-9-1821 and part of Bed of Bow Bowing Creek for which no Crown Grant has issued.

FIRST SCHEDULE

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.

Vol. 12432 Fol. 135

DP 255724
A. 23-2-78

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
[illegible] as to whole e.x pathway					

NEW CERTIFICATE(S) OF TITLE ISSUING ON DP 255724
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAWING BRANCH.

New Certificates of Title have issued on 28/3/78
for lots in Paperetoal Plan No. 255724 as follows:-
Lots 1-7 Vol. 13577 Fol. 39-45 respectively.

REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
			Interest of the Council of the City of Campbelltown in the near pathway shown on D.P. 255724	23.2.1978	—			

The residue of land in this folio comprises pathway
Registered 28-3-78

REGISTRAR GENERAL

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]ICATE OF TITLE

12084-032

NEW SOUTH WALES

PROPERTY ACT, 1900

Applns. Nos.19331 and 46912

For Crown Grants see Schedule

Prior Title Vol.11924 Fol.182

Vol. 12084 Fol. 32

Edition issued 3-4-1973

DEPOSITED PLAN 559867

CANCELLED

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

(Page 1) Vol. 12084 Fol. 32

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in the land set out in the Schedule of Grants hereunder at Minto in the City of Campbelltown Parishes of Minto and St.Peter and County of Cumberland.

SCHEDULE OF GRANTS

Lot and Deposited Plan	Parish	Number of Portion	Name of Grantee	Date of Grant
Lot 11 in D.P.559867	Minto	Pt.35	John Pendergast	20 - 6 - 1816
	Minto	Pt.36	Edward Myles	20 - 6 - 1816
	St.Peter	Pt.101	Sarah Byrne	20 - 6 - 1816
	St.Peter Minto and St.Peter	Pt.163 Pt. of Bed of Bow Bowing Creek	Thomas Rose For which no Crown Grant has issued.	3 - 9 - 1821

FIRST SCHEDULE

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

Registrar General.

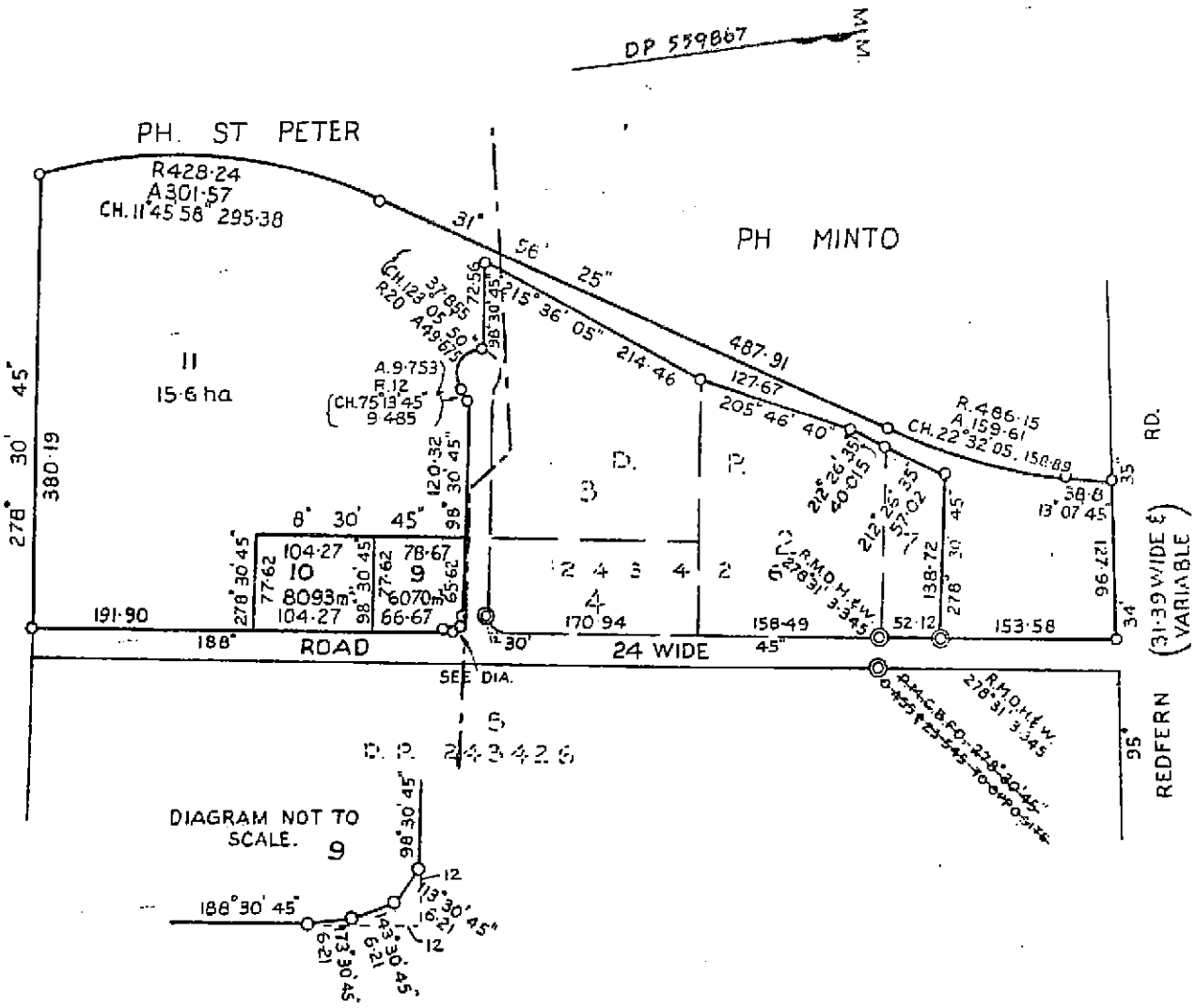
SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



DP 566245
Lot 181 etc

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General

This deed is cancelled as to the Whole
New Certificates of Title have issued on 19-4-1974
for lots in Deposited Plan No. 566245 as follows:-
Lots 15, 12, 14 & 13 Vol 12432 Fol 133 to 136 respectively.

REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Vol. 12084 Fol. 32

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
NATURE	NUMBER	DATE						

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]

FICATE OF TITLE

NEW SOUTH WALES

OPERTY ACT, 1900, as amended.

11924-182

Appln. Nos.19331 and 46912

For Crown Grants see Schedule

Prior Titles Vol. 11276 Fol. 219
Vol. 11276 Fol. 220

Vol. 11924 Fol. 182

Edition issued 6-9-1972

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness

Registrar General.

(Page 1) Vol. 11924 Fol. 182

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in the land set out in the Schedule of Grants hereunder at Minto in the City of Campbelltown Parishes of Minto and St.Peter and County of Cumberland.

SCHEDULE OF GRANTS

Lot and Deposited Plan	Parish	Number of Portion	Name of Grantee	Date of Grant
Lot 1 in D.P.243426	Minto	Pt.29	William Redfern	22 - 5 - 1811
	Minto	Pt.35	John Pendergast	20 - 6 - 1816
	St.Peter	Pt.101	Sarah Byrne	20 - 6 - 1816
	St.Peter	Pt.163	Thomas Rose	3 - 9 - 1821
	Minto & St.Peter	Pt. of Bed of Bow Bowing Creek.	For which no Crown Grant has issued.	

FIRST SCHEDULE

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

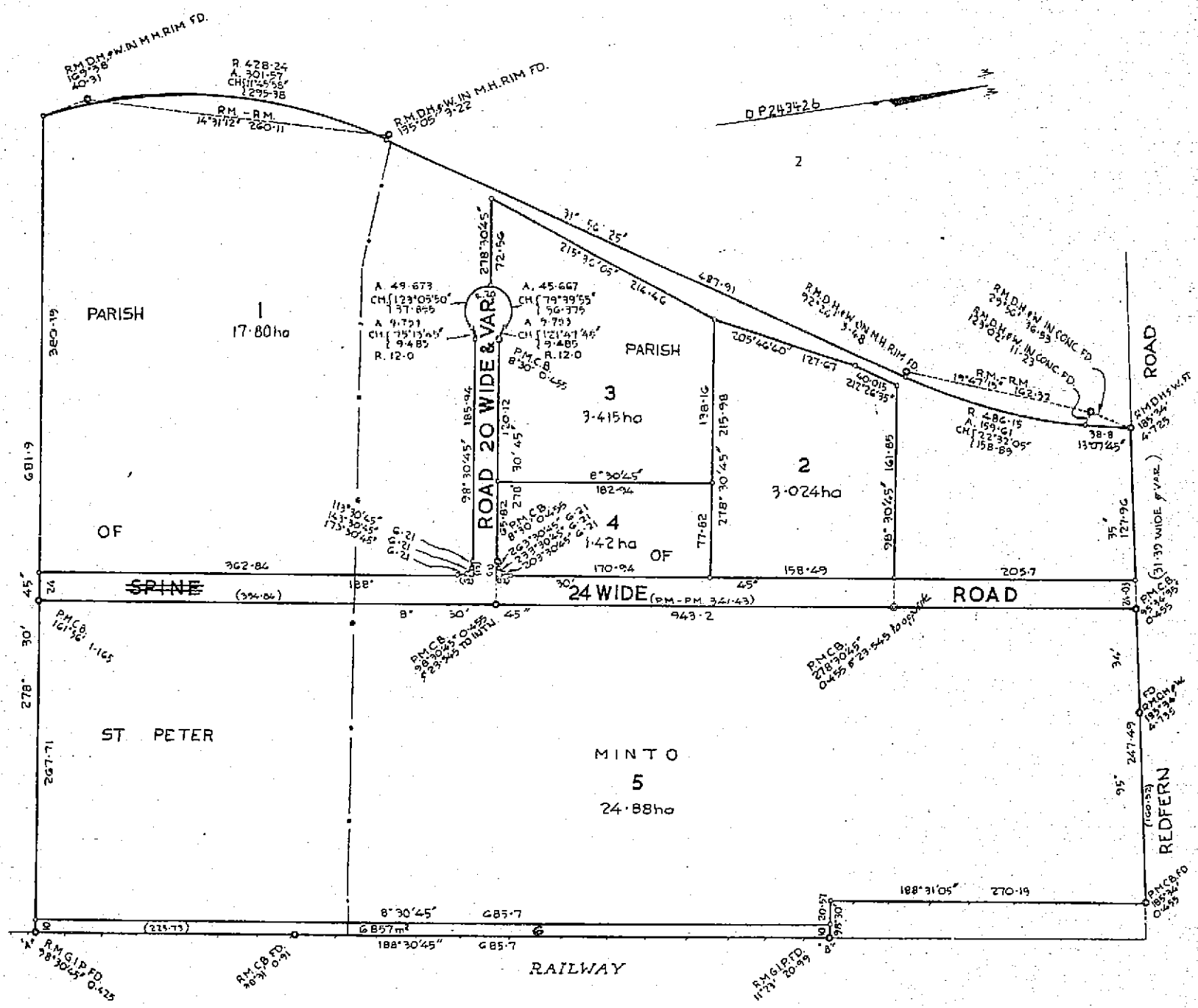
Registrar General.

SECOND SCHEDULE

NIL.

Registrar General.

Vol. 11924 Fol. 182



DP 559245 ... D.P. 559867 ... On D.P. 5598...

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This Deed is cancelled as to part and New Certificates of Title Vol 12047 Fol. 214 issued on 16-2-1973 for Lot 7	Deposited Plan	559245.		26-2-1973	J.Watson
This deed is cancelled as to the residue. New Certificates of Title have issued on 3-4-1973 for lots in Deposited Plan No. 559867 as follows:- Lots 9 to 11 Vol 12084 Fol 30 to 32 respectively. J.Watson REGISTRAR GENERAL					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Vol. 11924 Fol. 182

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
NATURE	NUMBER	DATE						

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]

NEW SOUTH WALES

ICATE OF TITLE

[redacted]PERTY ACT, 1900, as amended.

11276220

Application No. 46912

Prior Title Volume 11132 Folio 59

Vol. 11276 Fol. 220

CANCELLED

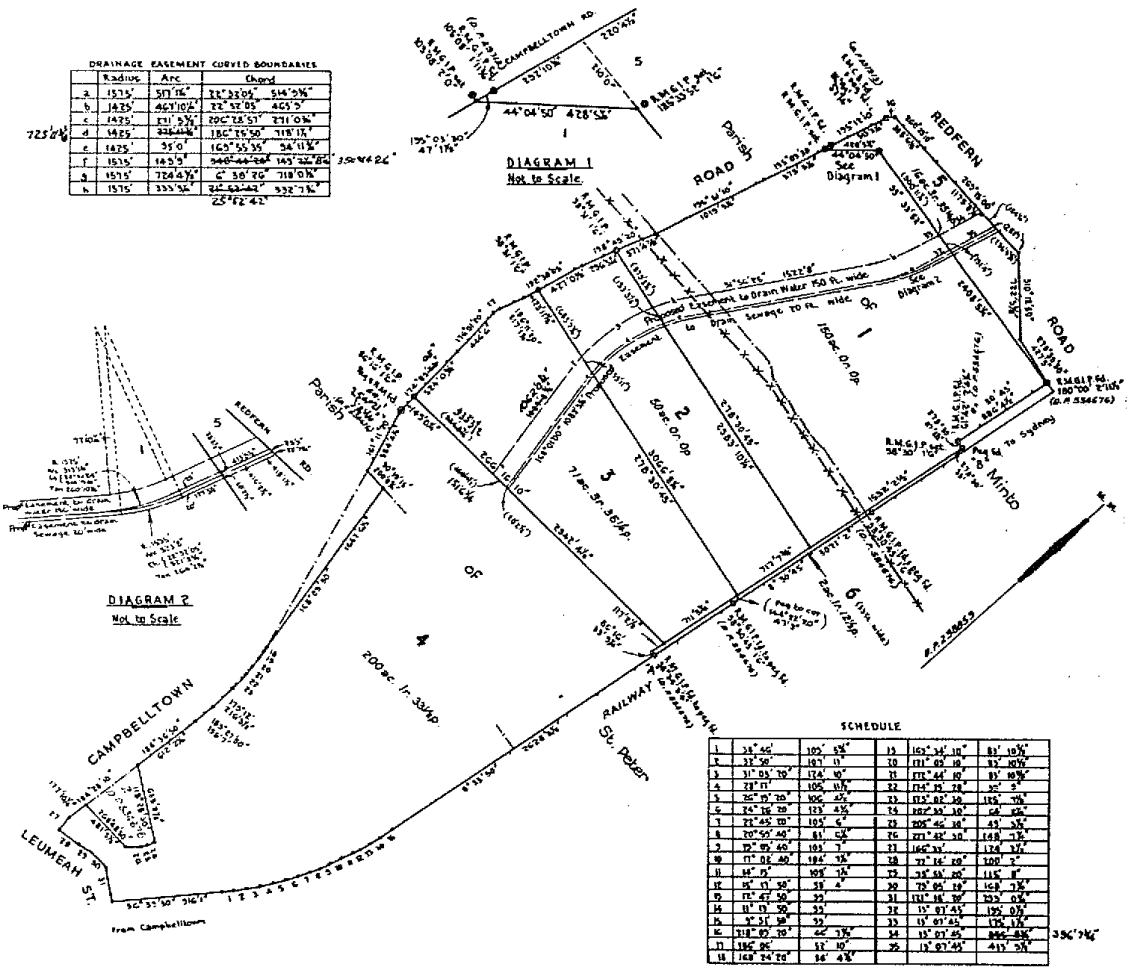
Edition issued 16-3-1970

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness G Barnes

Registrar General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 238859 at Leumeah in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 101 granted to Sarah Byrne on 20-6-1816, part of Portion 110 granted to John Craft on 20-6-1816, part of Portion 163 granted to Thomas Rose on 3-9-1821 and part of the Bed of Bow Bowing Creek being land for which no Crown Grant has issued.

FIRST SCHEDULE

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

SECOND SCHEDULE

NIL.

Registrar General.

Vol. 11276 Fol 220

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This Deed is cancelled as to part and New Certificates of Title Vol 11924 Fol 188 + 189 Issued on 6-9-1972 for Lots 2 + 3	Deposited Plan	556915		4-10-1972	
This deed is cancelled as to the Residue ex road New Certificates of Title have issued on 6-9-1972 for lots in Deposited Plan No. 243426 as follows:- Lots 1 to 6 inc. Vol. 11924 Fols 182 to 187 respectively. J. Watson REGISTRAR GENERAL					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
			~~In the interest of the Council of the City of Campbelltown in the new roads shown in D.P. 243426.~~ In the interest of the Council of the City of Campbelltown in the new roads shown in D.P. 243426. The residue of land in this certificate of title comprises road in DP 243426 Entered 4th October 1972 J. Watson REGISTRAR GENERAL.	23-8-1972	J. Watson			

DEP. REGISTR.

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]

NEW SOUTH WALES 46912

CERTIFICATE OF TITLE

PROPERTY ACT, 1900, as amended.

11276219

Applications Nos. 19331 and 46

For Crown Grants see Schedule

Vol. 11276 Fol. 219

Prior Title Volume 11132 Folio 59 EH Edition issued 16-3-1970

CANCELLED

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness G Barnes

Registrar General.

(Page 1) Vol. 11276 Fol. 219

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in the land set out in the Schedule of Grants hereunder at Minto and Leumeah in the City of Campbelltown Parishes of Minto and St.Peter and County of Cumberland.

SCHEDULE OF GRANTS.

Lot and Deposited Plan	Parish	Number of Portion	Name of Grantee	Date of Grant
Lot 1 D.P.238859	Minto	Pt.29	William Redfern	22 - 5 - 1811
	Minto	Pt.35	John Pendergast	20 - 6 - 1816
	Minto	Pt.36	Edward Myles	20 - 6 - 1816
	St.Peter	Pt.101	Sarah Byrne	20 - 6 - 1821
	St.Peter	Pt.163	Thomas Rose	3 - 9 - 1821
	Minto & St.Peter	Pt. of Bed of Bow Bowing Creek	For which no Crown Grant issued.	

FIRST SCHEDULE

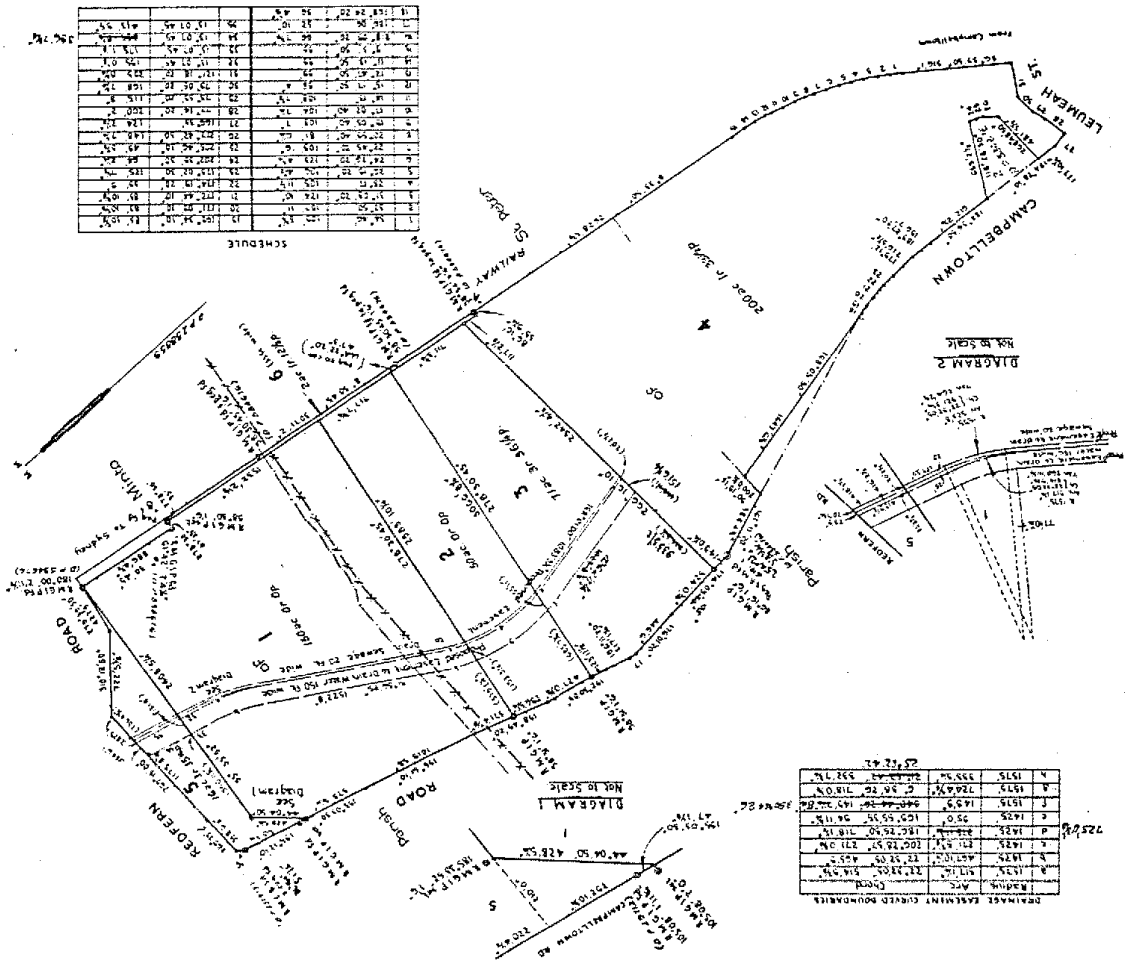
THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

Registrar General.

SECOND SCHEDULE

NIL.

Registrar General.


SCHEDULE
RAILWAY
LEUMEAH ST.
CAMPBELLTOWN
ROAD
REOPERN
Not to Scale
DIAGRAM 2
Not to Scale
DIAGRAM 1
Not to Scale

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This Deed is cancelled as to part and New Certificates of Title Vol 11924 Fols 188-189 issued on 6-9-1972 for lots 2-3 This deed is cancelled as to the Residue ex road New Certificates of Title have issued on 6-9-1972 for lots in Deposited Plan No. 243426 as follows:- Lots 1 to 6 incl Vol. 11924 Fols 182 to 187 respectively. Jawatson REGISTRAR GENERAL	Deposited Plan	556915		4-10-1972	Jawatson

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
			In the interest of the Council of the City of Campbelltown in the new roads shown in D.P. 243426. The residue of land in this certificate of title comprises road in DP 243426 Entered 4th October 1972 Jawatson REGISTRAR GENERAL.	23-8-1972.	Jawatson	

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Vol. 11276 Fol. 219

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
NATURE	NUMBER	DATE						

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

NEW SOUTH WALES

[redacted]CATE OF TITLE

[redacted]ERTY ACT, 1900, as amended.

Applns. Nos.8253,9038,19331, 28084,30849,43822 & 46912 (part)
For Crown Grants see Schedule
Prior Titles:-
Vol.2258 Fol. 53 Vol.9389 Fols.237 and 238
Vol.4528 Fol.105
Vol.4532 Fol.137 Vol.9929 Fol.104
Vol.7687 Fol.147 Vol.10502 Fol.172
Vol.7809 Fol. 24 Vol.10875 Fol. 75
Vol.9288 Fol. 82

Part

Vol. 11132 Fol. 59

CANCELLED

EH Edition issued 3-9-1969

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness L. Bollinger

Registrar General.

(Page 1) Vol. 11132 Fol. 59

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 534676 at Minto and Leumeah in the City of Campbelltown Parishes of Minto & St.Peter and County of Cumberland being part of the Crown Grants set out in the Schedule hereunder.

SCHEDULE OF GRANTS.

Parish	Number of Portion	Name of Grantee	Date of Grant
Minto	Pt.29	William Redfern	22 - 5 - 1811
	Pt.35	John Pendergast	20 - 6 - 1816
	Pt.36	Edward Myles	20 - 6 - 1816
St.Peter	Pt.96	Jeremiah Smith	20 - 6 - 1816
	Pt.97	William Kitson	20 - 6 - 1816
	Pt.98	William Lane	20 - 6 - 1816
	Pt.99	James Welch	20 - 6 - 1816
	Pt.100	Richard Knight	20 - 6 - 1816
	Pt.101	Sarah Byrne	20 - 6 - 1816
	Pt.115	William Mortimer	20 - 6 - 1816
	Pt.116	James Fletcher	20 - 6 - 1816
	Pt.110	John Craft	20 - 6 - 1816
	Pt.113	John Neale	20 - 6 - 1816
	Pt.128	William Ray	20 - 6 - 1816
	Pt.163	Thomas Rose	3 - 9 - 1821
Minto & St.Peter	Pt. of Bed of Bow Bowing Creek	For which no Crown Grant has issued.	

FIRST SCHEDULE

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES.

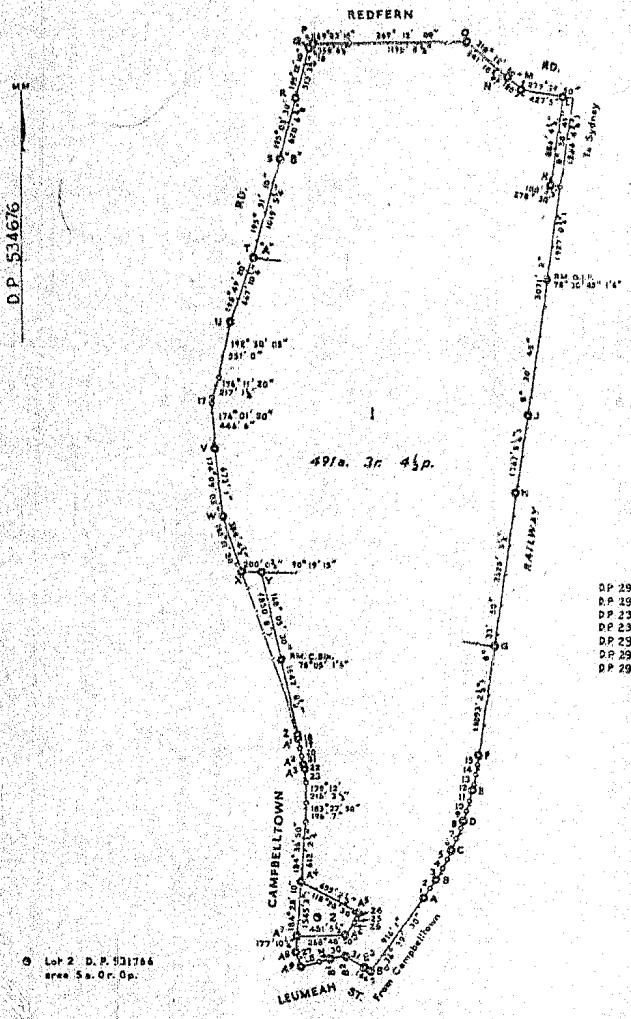
Registrar General.

SECOND SCHEDULE

1. Right of Way created by Transfer No.C114806 appurtenant to the part of the land above described formerly comprised in Certificate of Title Volume 4528 Folio 105 affecting the Right of Way shown within Lots 1 and 2 in Deposited Plan 17143.
2. Rights of Way created by Transfers Nos. C115649 and C115650 appurtenant to the part of the land above described formerly comprised in Certificate of Title Volume 4532 Folio 137 affecting the parts of Lots 2 and 1 respectively shown in Deposited Plan 17143 as Right of Way.

Registrar General.

Vol. 11132 Fol. 59



Lot 2 D.P. 531786 area 5a. 0r. 0p.

REFERENCE

	A	R.M. G.I.P.	114° 00'	1' 7½"	U	R.M. G.I.P.	30° 06'	3' 1"
	B	R.M. G.I.P.	120° 00'	1' 6½"	V	R.M. G.I.P.	66° 00'	1' 0"
	C	R.M. G.I.P.	123° 22'	1' 9"	W	R.M. G.I.P.	254° 21'	3' 4½"
	D	R.M. G.I.P.	110° 46'	1' 11½"	X	R.M. G.I.P.	90° 19' 15"	1' 6"
	E	R.M. G.I.P.	326° 05'	1' 5"	Y	R.M. C.Blk.	14° 40'	3' 4½"
	F	R.M. G.I.P.	183° 23'	7' 3½"	Z	R.M. C.Blk.	78° 24'	1' 6"
	G	R.M. G.I.P.	140° 15'	3' 6½"	A^1	R.M. C.Blk.	79° 00'	1' 6"
	H	R.M. G.I.P.	98° 14'	3' 4"	A^2	R.M. C.Blk.	83° 31'	1' 6"
	J	R.M. G.I.P.	98° 39' 65"	1' 6"	A^3	R.M. C.Blk.	82° 40'	1' 6"
	K	R.M. G.I.P.	61° 42'	2' 4½"	A^4	R.M. G.I.P.	170° 51'	1' 11"
	L	R.M. G.I.P.	180° 00'	2' 11½"	A^5	R.M. G.I.P.	125° 04'	1' 9½"
	M	R.M. G.I.P.	189° 40'	1' 6"	A^6	R.M. G.I.P.	256° 49'	2' 1½"
D.P. 29712	N	R.M. G.I.P.	115° 45'	1' 10½"	A^7	R.M. G.I.P.	94° 28'	1' 6"
D.P. 29712	O	R.M. G.I.P.	199° 41'	2' 1½"	A^8	R.M. C.Blk.	93° 30' 15"	1' 6½"
D.P. 231913	P	R.M. C. Blk.	153° 46'	1' 7½"	A^9	R.M. C.Blk.	31° 55' 15"	2' 1½"
D.P. 231913	Q	R.M. C.Blk.	116° 41'	5' 1½"	B^1	R.M. G.I.P.	344° 27'	1' 6"
D.P. 29712	R	R.M. G.I.P.	105° 08'	1' 11½"	B^2	R.M. G.I.P.	10° 10'	1' 7½"
D.P. 29712	S	R.M. G.I.P.	105° 27'	1' 11½"	B^3	R.M. G.I.P.	31° 24'	1' 6"
D.P. 29712	T	R.M. G.I.P.	76° 29'	1' 11½"	B^4	R.M. G.I.P.	34° 11'	1' 5½"

NOTE Ref. Marks N to T found.

SCHEDULE

1	34°44'	109' 5½"	17	186°06'	52' 10"		
2	32°50'	107' 11"	18	168°24' 20"	36' 4½"		
3	31°03' 20"	124' 10"	19	155°36' 10"	83' 10½"		
4	28°17'	105' 11½"	20	171°09' 10"	83' 10½"		
5	26°19' 20"	106' 4½"	21	152°46' 10"	83' 10½"		
6	24°26' 20"	122' 4½"	22	174°19' 20"	9'		
7	22°45' 30"	109' 6"	23	193°03' 30"	1..	7½"	
8	20°59' 40"	81' 6½"	24	202°39' 30"	44'	2½"	
9	19°03' 40"	103' 7"	25	205°46' 30"	49'	3½"	
10	17°02' 40"	104' 7½"	26	217°42' 30"	148'	7½"	
11	14°13'	108' 7½"	27	166°33'	124'	2½"	
12	15°17' 50"	58' 4"	28	77°14' 20"	30'	2"	
13	12°47' 50"	99'	29	73°53' 20"	115'	8"	
14	11°12' 50"	99'	30	79°05' 20"	168'	7½"	
15	9°31' 50"	99'	31	121°18' 20"	293'	03½"	
16	218°09' 20"	66' 7½"					

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This deed is cancelled as to Whole New Certificates of Title have issued on 16.3.1920 for lots in Deposited Plan No. 238859 as follows:- Lots 1 to 6 Vol 11276 Fol 219 to 224 respectively. REGISTRAR GENERAL					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION	

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

(Page 3 of 4 pages)

DP238859 Cancellation

Vol. 11132 Fol. 59

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
NATURE	NUMBER	DATE						

(Page 4 of 4 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

CERTIFICATE OF TITLE

NEW SOUTH WALES

REAL PROPERTY ACT, 1900

14530131

Appln. No.46912

Prior Title Vol.13577 Fol.43

Vol. 14530 Fol. 131

EDITION ISSUED

CANCELLED 1988

14530 Fol. 131 (Page 1) Vol.

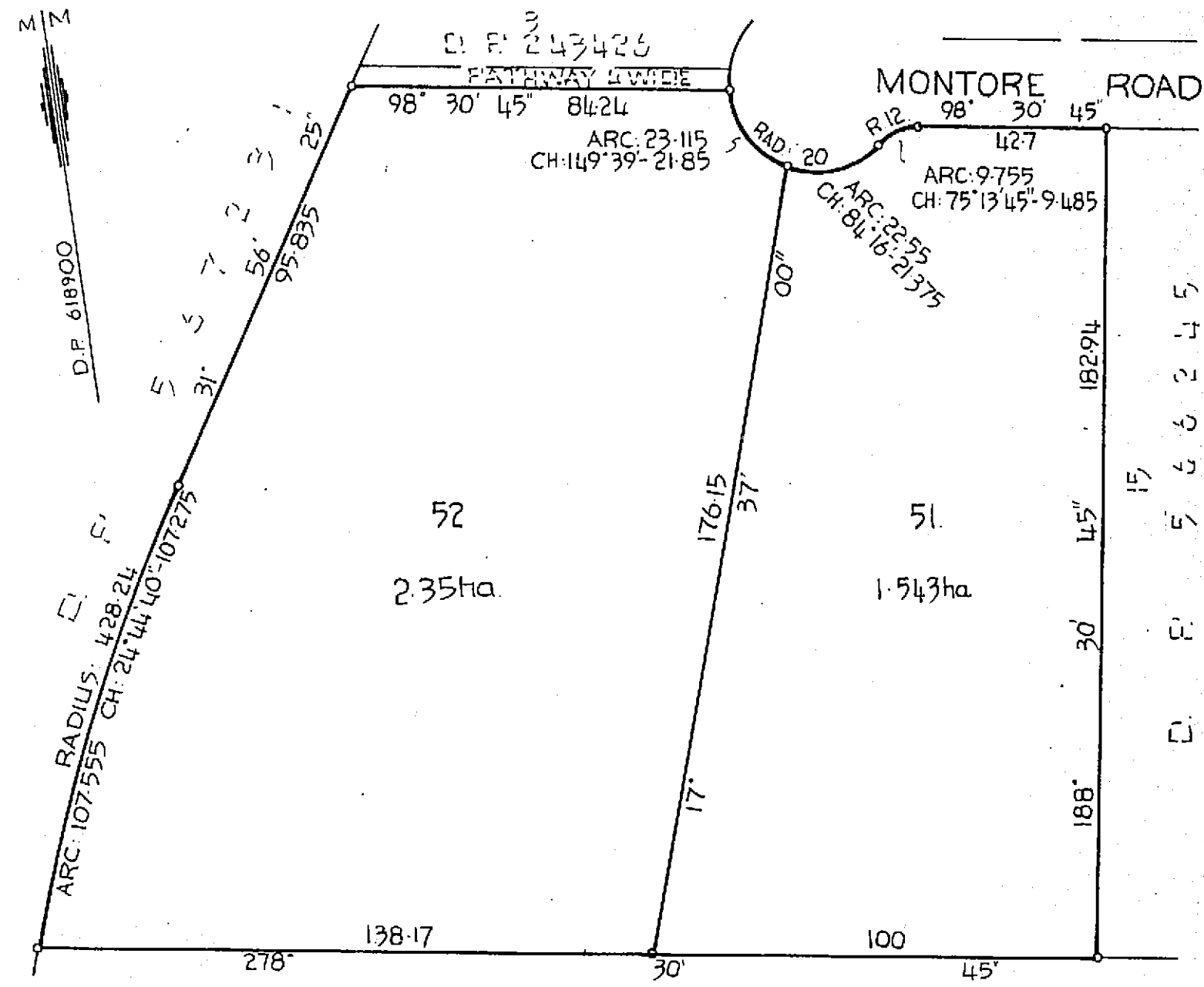
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

SEE AUTO FOLIO

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 52 in Deposited Plan 618900 at Minto in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 101 granted to Sarah Byrne on 20-6-1816 and part of land for which no Crown Grant has issued.

FIRST SCHEDULE

~~MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.~~

GRY

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Registrar General

Director, Macarthur Growth Area by Transfer V755148. Registered 12-7-1985

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION

NOTATIONS AND UNREGISTERED DEALINGS

CLOSED

[redacted]

FICATE OF TITLE

13577043

NEW SOUTH WALES

[redacted]L PROPERTY ACT, 1900

Appln. No.46912

Prior Titles Vol.12432 Fol.135
Vol.12432 Fol.136

Vol. 13577 Fol. 43

EDITION ISSUED

29 3 1978

(Page 1) Vol. 13577 Fol. 43

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

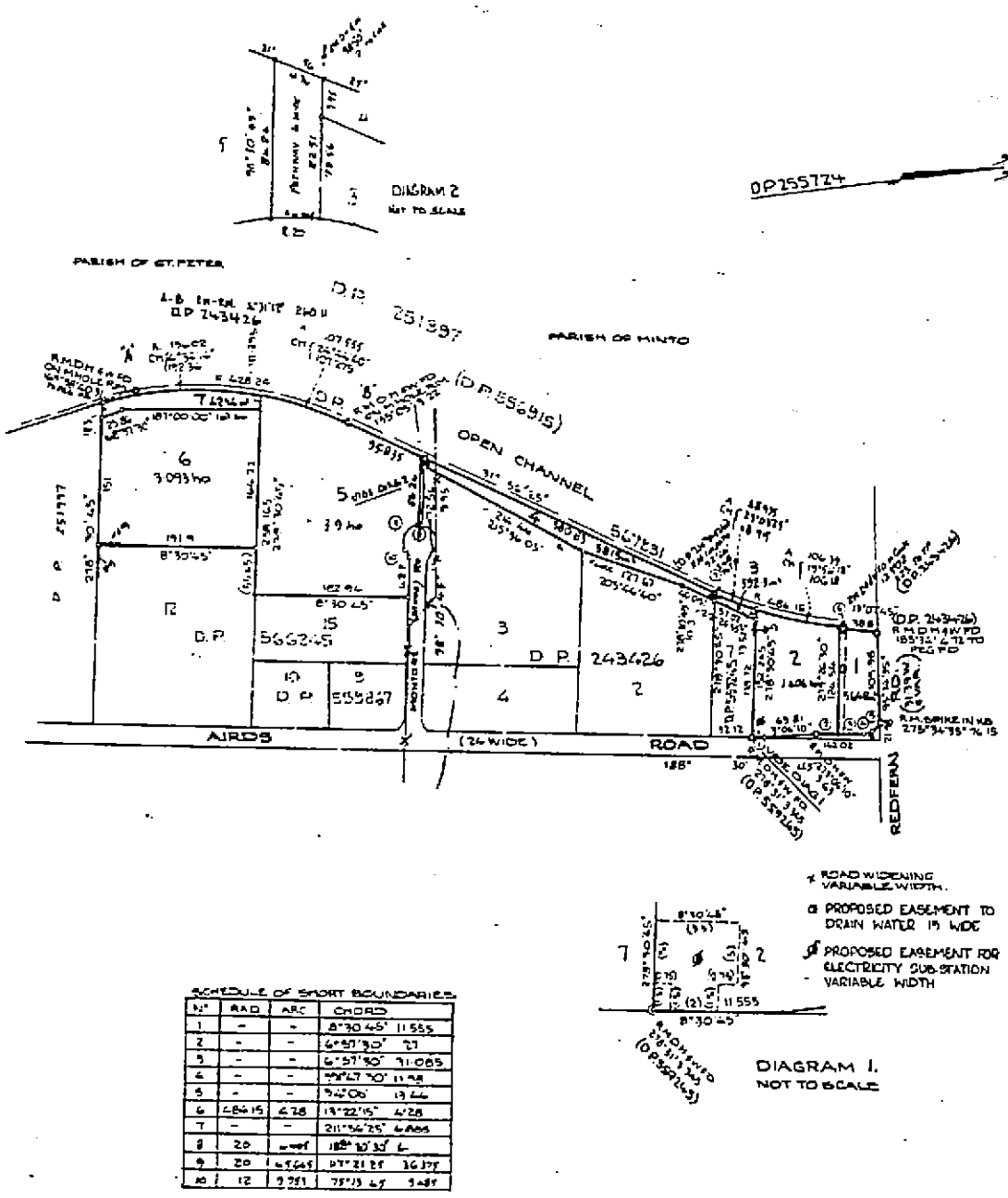
Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES

CANCELLED

DP255724



SCHEDULE OF SHORT BOUNDARIES

No.	RAD.	ARC	CHORD
1	-	-	8°30'45" 11.555
2	-	-	6°57'30" 27
3	-	-	6°57'30" 31.085
4	-	-	99°47'30" 11.98
5	-	-	90°00' 13.44
6	484.15	4.28	1°22'15" 4.28
7	-	-	211°34'25" 6.866
8	20	[illegible]	188°30'30" [illegible]
9	20	41.965	97°21'25" 36.979
10	12	9.251	75°19'45" 9.001

S

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 5 in Deposited Plan 255724 at Minto in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 101 granted to Sarah Byrne on 20-6-1816, part of Portion 163 granted to Thomas Rose on 3-9-1821 and part of the bed of Bow Bowing Creek being land for which no Crown Grant has issued.

FIRST SCHEDULE

N.S.W. PLANNING AND ENVIRONMENT COMMISSION.

SECOND SCHEDULE

GRY 1. Reservations and conditions, if any, contained in the Crown Grants above referred to.

D. West, Government Printer, New South Wales

DP618900

Vol. 13577 Fol 43

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General

DP618900

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		

This deed is cancelled as to whole
New Certificates of Title have issued on 8-9-1981
for lots in Deposited Plan No. 618900 as follows:-
Lots 51 to 52 Vol. 14530 Fol. 130 to 131 respectively.

REGISTRAR GENERAL

REGISTRAR GENERAL

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 52/618900

SEARCH DATE	TIME	EDITION NO	DATE
25/5/2016	2:47 PM	8	28/8/2012

LAND

LOT 52 IN DEPOSITED PLAN 618900
AT MINTO
LOCAL GOVERNMENT AREA CAMPBELLTOWN
PARISH OF ST PETER COUNTY OF CUMBERLAND
TITLE DIAGRAM DP618900

FIRST SCHEDULE

CAMOLAW PTY LIMITED (T AH201725)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

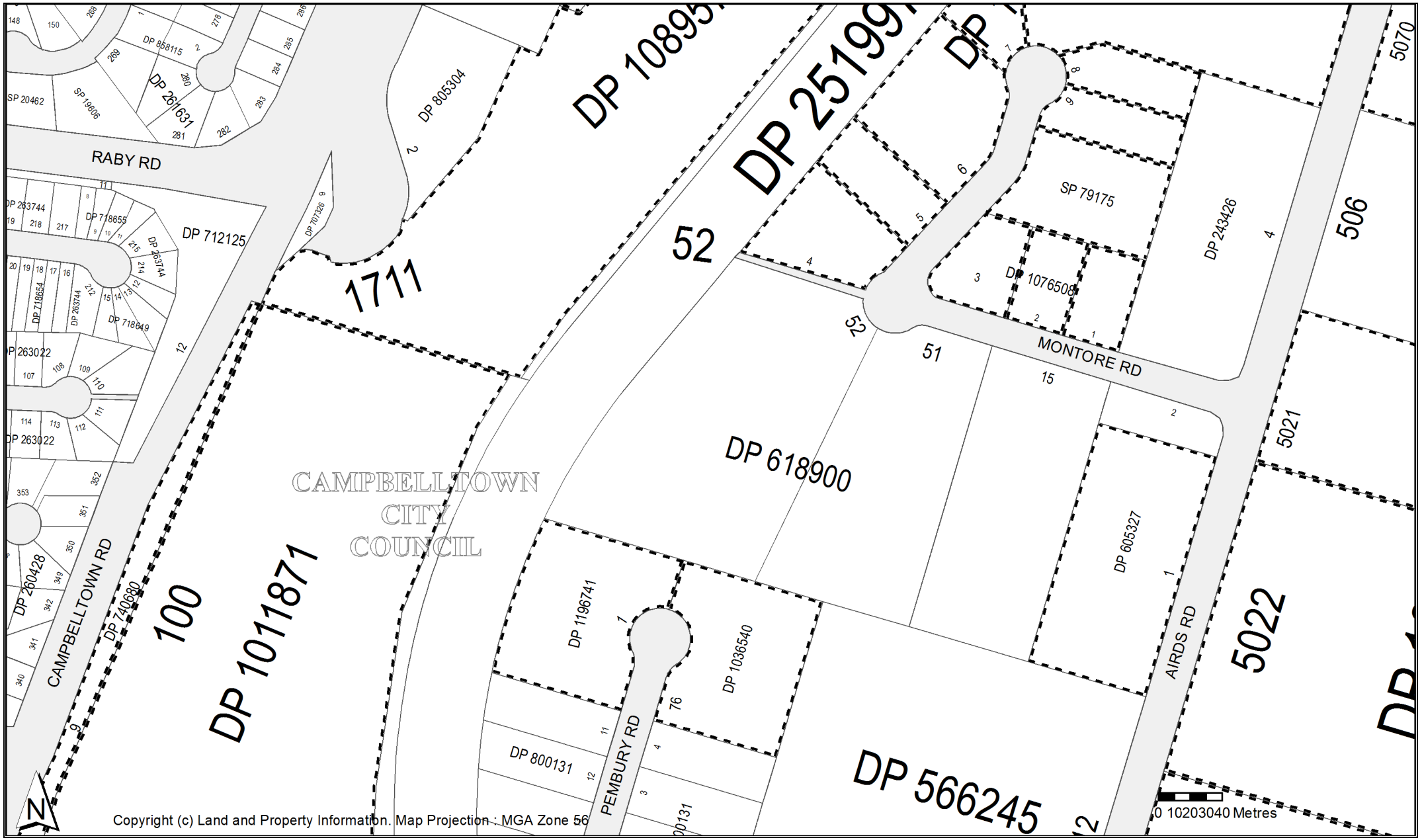
Land & Property Information
A division of the Department of Finance & Services

Cadastral Records Enquiry Report

Ref : EIS - Minto

Requested Parcel : Lot 52 DP 618900 **Identified Parcel :** Lot 52 DP 618900

Locality : MINTO **LGA :** CAMPBELLTOWN **Parish :** MINTO **County :** CUMBERLAND



Copyright (c) Land and Property Information. Map Projection : MGA Zone 56

Report Generated 2:47:23 PM, 25 May, 2016

This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

Cadastral Records Enquiry Report

Ref : EIS - Minto

Requested Parcel : Lot 52 DP 618900 **Identified Parcel :** Lot 52 DP 618900

Locality : MINTO **LGA :** CAMPBELLTOWN **Parish :** MINTO **County :** CUMBERLAND

	Status	Surv/Comp	Purpose
DP605327			
Lot(s): 1			
DP1109710	REGISTERED	SURVEY	EASEMENT
DP733565			
Lot(s): 500			
DP1021772	REGISTERED	SURVEY	SUBDIVISION
DP1128451	REGISTERED	SURVEY	EASEMENT
DP740680			
Lot(s): 9			
DP611390	HISTORICAL	SURVEY	SUBDIVISION
DP807078			
Lot(s): 5070			
DP1069824	REGISTERED	SURVEY	EASEMENT
DP1011871			
Lot(s): 100			
DP251997	HISTORICAL	SURVEY	SUBDIVISION
DP611390	HISTORICAL	SURVEY	SUBDIVISION
DP740680	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1034460	REGISTERED	COMPILATION	EASEMENT
DP1012382			
Lot(s): 5022			
DP1149954	WITHDRAWN	UNAVAILABLE	SUBDIVISION
Lot(s): 5021			
DP1031791	REGISTERED	SURVEY	EASEMENT
Lot(s): 5021, 5022			
DP740932	HISTORICAL	SURVEY	SUBDIVISION
DP1036540			
Lot(s): 76			
DP800131	HISTORICAL	SURVEY	SUBDIVISION
DP1076508			
Lot(s): 1, 2, 3, 4, 5, 6, 7, 8, 9, 12			
DP748369	HISTORICAL	SURVEY	CONSOLIDATION
Lot(s): 4, 5, 6, 7, 12			
DP255724	HISTORICAL	SURVEY	SUBDIVISION
DP1089572			
Lot(s): 1711			
DP878463	HISTORICAL	SURVEY	SUBDIVISION
DP1186540			
Lot(s): 607			
CA167767 - LOT 607 DP1186540			
DP1196741			
Lot(s): 1			
DP800131	HISTORICAL	SURVEY	SUBDIVISION
DP818914	HISTORICAL	COMPILATION	CONSOLIDATION
SP79175			
DP748369	HISTORICAL	SURVEY	CONSOLIDATION
DP1076508	REGISTERED	SURVEY	SUBDIVISION
DP1108961	REGISTERED	COMPILATION	CONSOLIDATION

Caution: For all **ACTIVITY PRIOR to SEPT 2002** you must refer to the RGs Charting and Reference Maps.

Requested Parcel : Lot 52 DP 618900 **Identified Parcel :** Lot 52 DP 618900

Locality : MINTO **LGA :** CAMPBELLTOWN **Parish :** MINTO **County :** CUMBERLAND

Plan	Surv/Comp	Purpose
DP243426	SURVEY	SUBDIVISION
DP251997	SURVEY	SUBDIVISION
DP260428	SURVEY	SUBDIVISION
DP261631	SURVEY	SUBDIVISION
DP262162	SURVEY	SUBDIVISION
DP262559	SURVEY	SUBDIVISION
DP263022	SURVEY	SUBDIVISION
DP263744	SURVEY	SUBDIVISION
DP566245	COMPILATION	SUBDIVISION
DP605327	COMPILATION	SUBDIVISION
DP618900	COMPILATION	SUBDIVISION
DP621757	COMPILATION	SUBDIVISION
DP700527	SURVEY	SUBDIVISION
DP707326	SURVEY	RESUMPTION OR ACQUISITION
DP712125	COMPILATION	RESUMPTION OR ACQUISITION
DP718649	SURVEY	SUBDIVISION
DP718653	SURVEY	SUBDIVISION
DP718654	SURVEY	SUBDIVISION
DP718655	SURVEY	SUBDIVISION
DP733565	SURVEY	SUBDIVISION
DP740680	SURVEY	RESUMPTION OR ACQUISITION
DP792909	COMPILATION	SUBDIVISION
DP800131	SURVEY	SUBDIVISION
DP805304	SURVEY	SUBDIVISION
DP807078	SURVEY	SUBDIVISION
DP815215	SURVEY	SUBDIVISION
DP858115	COMPILATION	CONSOLIDATION
DP1011871	COMPILATION	CONSOLIDATION
DP1012382	SURVEY	SUBDIVISION
DP1036540	COMPILATION	CONSOLIDATION
DP1076508	SURVEY	SUBDIVISION
DP1089572	SURVEY	SUBDIVISION
DP1196741	SURVEY	CONSOLIDATION
SP19606	COMPILATION	STRATA PLAN
SP20462	COMPILATION	STRATA PLAN
SP55907	COMPILATION	STRATA PLAN
SP79175	COMPILATION	STRATA PLAN

Section 149 Certificates

campbelltown
city council

Issue Date: 28 June 2016
Application Number: 201602550
Receipt Number: 3327948

Lotsearch Pty Ltd
Level 3
68 Alfred St
MILSONS POINT NSW 2061

Your Reference: LS000475

PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Section 149 Planning Certificate phone enquiries: (02) 4645 4560.

Property Address: 7 Montore Road
MINTO NSW 2566

Property Description: Lot 52 DP 618900

As at the date of issue, the following matters apply to the land subject of this certificate:

INFORMATION PROVIDED UNDER SECTION 149(2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (the Act)

PART 1 – Names of relevant planning instruments and DCPs

Planning Instrument: Campbelltown LEP 2015
Effect: IN1 General Industrial

(1) The following environmental planning instruments apply to the carrying out of development on the land subject of this certificate:

Local environmental plans (LEPs) and deemed environmental planning instruments

Campbelltown LEP 2015

For further information about these local environmental plans and deemed environmental planning instruments, contact Council's Environmental Planning Section on (02) 4645 4601.

State environmental planning policies (SEPPs)

SEPP No.21 – Caravan Parks

SEPP No.30 – Intensive Agriculture

SEPP No.33 – Hazardous and Offensive Development

SEPP No.44 – Koala Habitat Protection

SEPP No.50 – Canal Estate Development

SEPP No.55 – Remediation of Land

SEPP No.64 – Advertising and Signage

SEPP No.65 – Design Quality of Residential Apartment Development

SEPP No.70 – Affordable Housing (Revised Schemes)

SEPP No.19 - Bushland in Urban Areas

SEPP No.32 - Urban Consolidation (Redevelopment of Urban Land)

SEPP (Building Sustainability Index: BASIX) 2004

SEPP (State Significant Precincts) 2005

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

SEPP (Miscellaneous Consent Provisions) 2007

SEPP (Infrastructure) 2007

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Affordable Rental Housing) 2009

SEPP (State and Regional Development) 2011

Greater Metropolitan REP No.2 - Georges River Catchment

For further information about these State environmental planning policies, contact the Department of Planning and Environment (www.planning.nsw.gov.au).

(2) The following proposed environmental planning instruments, which are or have been the subject of community consultation or on public exhibition under the Act (unless the Director-General has notified Council that the making of the proposed instrument has been deferred indefinately or has not been approved), will apply to the carrying out of development on the land subject of this certificate:

Draft local environmental plans (LEPs)

None

For further information about these draft local environmental plans, contact Council's Environmental Planning Section on (02) 4645 4601.

Draft State environmental planning policies (SEPPs)

None

For further information about these draft State environmental planning policies, contact the Department of Planning and Environment (www.planning.nsw.gov.au).

(3) The following development control plans (DCPs) apply to the carrying out of development on the land subject of this certificate:

DCP No.99 – Advertising Signs

Campbelltown (Sustainable City) DCP 2015 Volume 1

For further information about these development control plans, contact Council's Environmental Planning Section on (02) 4645 4601. Please note that the names of any draft development control plans that apply to the land subject of this certificate, that have been placed on exhibiton by Council but have not yet come into effect, are provided as advice under section 149(5) of the Act.

PART 2 – Zoning and land use under relevant LEPs

a) The following zone(s) apply to the land subject of this certificate:

IN1 General Industrial

b) The purposes for which the plan or instrument provides that development may be carried out without the need for development consent are detailed in the land use table for each zone. Reference should be made to either Attachment 1 to this certificate or the appropriate section of the attached copy of the plan or instrument.

In addition, SEPP (Exempt and Complying Development Codes) 2008 and clause 3.1 of the Campbelltown LEP 2015 allow certain types of development to be carried out as exempt development within the Campbelltown City local government area.

c) The purposes for which the plan or instrument provides that development may not be carried out except with development consent are detailed in the land use table for each zone. Reference should be made to either Attachment 1 to this certificate or the appropriate section of the attached copy of the plan or instrument.

In addition, SEPP (Exempt and Complying Development Codes) 2008 and clause 3.2 of the Campbelltown LEP 2015 allow certain types of development to be carried out as complying development within the Campbelltown City local government area after a complying development certificate has been obtained from Council or from an accredited certifier. Clause 2.5 of the Campbelltown LEP 2015 also allows for additional permitted uses with development consent on particular land.

d) The purposes for which the plan or instrument provides that development is prohibited are detailed in the land use table for each zone. Reference should be made to either Attachment 1 to this certificate or the appropriate section of the attached copy of the plan or instrument.

e) Any development standards applying to the land subject of this certificate that fix minimum land dimensions for the erection of a dwelling-house and, if so, the minimum land dimensions so fixed are detailed in the relevant section of the plan or instrument. Reference should be made to either Attachment 2 to this certificate or the appropriate section(s) of the attached copy of the plan or instrument. In addition, certain Council development control plans may impose minimum development standards for the creation of allotments and/or minimum site area and dimensions for the erection of a dwelling-house.

For further information about items a), b), c), d) and e) above, contact Council's Environmental Planning Section on (02) 4645 4601.

f) The land subject of this certificate does not include or comprise critical habitat.

g) The land subject of this certificate is not in a conservation area (however described).

h) No item of environmental heritage (however described) is situated on the land subject of this certificate.

PART 2A – Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

None

PART 3 – Complying development

(1) Complying development may be carried out on the land subject of this certificate under each of the following codes for complying development, to the extent shown, because of the provisions of clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008:

General Housing Code – on all of the land

Housing Alterations Code – on all of the land

Commercial and Industrial Alterations Code – on all of the land

Subdivisions Code – on all of the land

Rural Housing Code – on all of the land

General Development Code – on all of the land

Demolition Code – on all of the land

Commercial and Industrial (New Buildings and Additions) Code – on all of the land

Fire Safety Code – on all of the land

Please note that reference should also be made to the relevant parts of this policy for the general requirements for complying development and to the relevant codes for complying development which may also include provisions relating to zoning, lot size etc.

(2) Complying development may not be carried out on the land subject of this certificate under each of the following codes for complying development, to the extent shown and for the reason(s) stated, because of the provisions of clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008:

Not applicable

PART 4 – Coastal protection

The land subject of this certificate is not affected by the operation of section 38 or 39 of the Coastal Protection Act 1979, but only to the extent that Council has been notified by the Department of Public Works.

PART 5 – Mine subsidence

The land subject of this certificate is not within a proclaimed Mine Subsidence District within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

PART 6 – Road widening and road realignment

The land subject of this certificate is not affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993, any environmental planning instrument or any resolution of Council.

PART 7 – Council and other public authority policies on hazard risk restrictions

a) Council has adopted a policy with respect to all land within the Campbelltown City local government area with unusual site conditions. This policy restricts the development of land where extensive earthworks and/or filling has been carried out. Land, the development of which is restricted by this policy, has a restriction as to user placed on the title of the land stating the details of any restriction. Building lots can be affected by excessive land gradient, filling, reactive or dispersive soils, overland flow and/or mine subsidence. Buildings, structures or site works may require specific structural design to ensure proper building construction. Consequently, some applications may require the submission of structural design details and geotechnical reports. It is suggested that prior to lodging an application, enquiries be made to Council's Planning and Environment Division to ascertain any specific requirements.

b) Council has adopted by resolution the certified Campbelltown LGA Bush Fire Prone Land Map. This map identifies bush fire prone land within the Campbelltown City local government area as defined in section 4(1) of the Act. Where the land subject of this certificate is identified as bush fire prone land, the document entitled "Planning for Bush Fire Protection" prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and dated December 2006 should be consulted with regards to possible restrictions on the development of the land because of the likelihood of bushfire.

c) The land subject of this certificate is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council for reference in a planning certificate that restricts the development of the land because of the likelihood of tidal inundation.

d) The land subject of this certificate is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council for reference in a planning certificate that restricts the development of the land because of the likelihood of acid sulphate soils.

e) Council has adopted by resolution a policy on contaminated land which may restrict the development of the land subject of this certificate. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.

PART 7A – Flood related development controls information

(1) Development on all or part of the land subject of this certificate for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related controls.

(2) Development on all or part of the land subject of this certificate for any other purpose is subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

Please note that some additional information regarding flooding and flood related development controls may be provided as advice under section 149(5) of the Act.

PART 8 – Land reserved for acquisition

No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land subject of this certificate provides for the acquisition of this land by a public authority, as referred to in section 27 of the Act.

PART 9 – Contribution plans

The following contribution plan(s) apply to the land subject of this certificate:

Campbelltown City Council Section 94A Development Contributions Plan

For further information about these contribution plans, contact Council's Environmental Planning Section on (02) 4645 4601.

PART 9A – Biodiversity certified land

The land subject of this certificate is not biodiversity certified land (within the meaning of Part 7AA of the Threatened Species Conservation Act 1995).

PART 10 – Biobanking agreement

The land subject of this certificate is not land to which a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995 relates (but only in so far as Council has been notified of the existence of any such agreement by the Director-General of the Department of Environment, Climate Change and Water).

PART 11 – Bush fire prone land

None of the land subject of this certificate has been identified as bush fire prone land on the Campbelltown City Council - Bush Fire Prone Land Map that has been certified for the purposes of section 146(2) of the Act.

PART 12 – Property vegetation plans

No property vegetation plan applies to the land subject of this certificate as the whole of the Campbelltown City local government area is excluded from the operation of the Native Vegetation Act 2003.

PART 13 – Orders under Trees (Disputes Between Neighbours) Act 2006

No order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land subject of this certificate (but only to the extent that Council has been notified of any such orders).

PART 14 – Directions under Part 3A

No direction, in force under section 75P(2)(c1) of the Act, that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land subject of this certificate under Part 4 of the Act does not have effect, has been issued by the Minister.

PART 15 – Site compatibility certificates and conditions for seniors housing

a) No current site compatibility certificate (seniors housing), of which Council is aware, exists in respect of proposed development on the land subject of this certificate.

b) No conditions of consent to a development application, granted after 11 October 2007, of the kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed in respect of proposed development on the land subject of this certificate.

PART 16 – Site compatibility certificates for infrastructure

No valid site compatibitlity certificate (infrastructure), of which Council is aware, exisits in respect of proposed development on the land subject of this certificate.

PART 17 – Site compatibility certificates and conditions for affordable rental housing

(1) No current site compatibility certificate (affordable rental housing), of which Council is aware, exists in respect of proposed development on the land subject of this certificate.

(2) No conditions of consent to a development application of the kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed in respect of proposed development on the land subject of this certificate.

Matters prescribed by section 59(2) of the Contaminated Land Management Act 1997

(a) The land subject of this certificate is not significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.

(b) The land subject of this certificate is not subject to a management order within the meaning of the Contaminated Land Management Act 1997.

(c) The land subject of this certificate is not the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.

(d) The land subject of this certificate is not subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.

(e) The land subject of this certificate is not the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 provided to Council.

INFORMATION PROVIDED UNDER SECTION 149(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

All properties within the Campbelltown City local government area may be affected by flooding caused by overland flow or local topography. Applicants will need to make their own assessment of the risk associated with these matters. For more information, contact Council's Flood Mitigation and Drainage Section in writing.

Council is currently undertaking a flood study of the Bow Bowing / Bunbury Curran Creek Catchment, of which this property is a part. The results of this study will improve Council's understanding of flood behaviour in the catchment, and the flood affectation of all properties will be reassessed when this study is finalised. It is anticipated that the Floodplain Risk Management Plan will be finalised by the end of 2015.

Council has received a copy of the map "Salinity Potential in Western Sydney - 2002" from the Department of Infrastructure, Planning and Natural Resources (DIPNR). This map classifies the land within the Campbelltown City local government area as having either known salinity, high salinity potential, moderate salinity potential or low salinity potential. Salinity issues may be of relevance to any development of the land subject of this certificate. For further information, contact the Department of Infrastructure, Planning and Natural Resources (www.dipnr.nsw.gov.au).

It should be noted that the Commonwealth Department of Infrastructure and Regional Development has released a document titled "Preliminary Flight Paths" purporting to provide preliminary information on jet aircraft flight paths and flight zones for each of the design options for the Second Sydney Airport Proposals. Some of the flight paths and flight zones shown in this document may, if implemented, impact upon the environment in the vicinity of the land subject of this certificate. Further enquiries in respect of this document should be directed initially to the Commonwealth Department of Infrastructure and Regional Development.

The land subject of this certificate does not have a boundary to a controlled access road.

The following draft development control plans (DCPs), that have been placed on exhibition by Council but which have not yet come into effect, apply to the land subject of this certificate:

Draft Campbelltown (Sustainable City) DCP 2015 Amendment No.1

For further information about these draft development control plans, contact Council's Environmental Planning Section on (02) 4645 4601.

Jeff Lawrence, per
Director Planning and Environment

Attachment 1

Campbelltown Local Environmental Plan 2015

Zone IN1 General Industrial

1 Objectives of zone

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To provide for a range of facilities and services to meet the day-to-day needs of workers in the area.
- To enable non-industrial land uses that are compatible with and do not detract from industrial and warehouse uses or impact on the viability of existing centres.
- To ensure that any commercial, retail or other non-industrial development is not likely to adversely affect employment generating activities or opportunities.
- To facilitate diverse and sustainable means of access and movement.

2 Permitted without consent

Nil

3 Permitted with consent

Animal boarding or training establishments; Boat building and repair facilities; Car parks; Depots; Environmental facilities; Environmental protection works; Flood mitigation works; Freight transport facilities; Garden Centres; General industries; Hardware and building supplies; Helipads; Highway service centres; Industrial retail outlets; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Mortuaries; Neighbourhood shops; Passenger transport facilities; Places of public worship; Roads; Rural industries; Rural supplies; Service stations; Sex services premises; Signage; Storage premises; Take away food and drink premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres

4 Prohibited

Any development not specified in item 2 or 3

NOTE: A copy of the complete written instrument for the Campbelltown Local Environmental Plan 2015 is available on the NSW Legislation website at: http://www.legislation.nsw.gov.au

Attachment 2

Campbelltown Local Environmental Plan 2015

4.1 Minimum subdivision lot size

(1) The objectives of this clause are as follows:

(a) to ensure that the density of development is compatible with the capacity of existing and proposed infrastructure,

(b) to ensure that the density of settlement will be compatible with the objectives of the zone,

(c) to limit the density of settlement in environmentally, scenically or historically sensitive areas,

(d) to ensure lot sizes are compatible with the conservation of natural systems, including waterways, riparian land and groundwater dependent ecosystems,

(e) to facilitate viable agricultural undertakings,

(f) to protect the curtilage of heritage items and heritage conservation areas,

(g) to facilitate a diversity of housing forms.

(2) This clause applies to a subdivision of any land shown on the Lot Size Map that requires development consent and that is carried out after the commencement of this Plan.

(3) The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land.

(4) This clause does not apply in relation to the subdivision of individual lots in a strata plan or community title scheme.

(4A) If a lot is a battle-axe lot or other lot with an access handle, the area of the access handle is not to be included in calculating the lot size.

(4B) Despite subclause (3), development consent may be granted for the subdivision of land into lots that do not meet the minimum size shown on the Lot Size Map if the lots are residue lots resulting

4.1AA Minimum subdivision lot size for community title schemes

(1) The objectives of this clause are as follows:

(a) to provide for the proper and orderly development of land,

(b) to ensure that land developed under the *Community Land Development Act 1989* will achieve densities consistent with the objectives of the zone,

(c) to protect the curtilage of heritage items and heritage conservation areas.

(2) This clause applies to a subdivision (being a subdivision that requires development consent) under the *Community Land Development Act 1989* of land in any of the following zones:

(a) Zone RU2 Rural Landscape,

(b) Zone R2 Low Density Residential,

(c) Zone R3 Medium Density Residential,

(d) Zone R5 Large Lot Residential,

(e) Zone E3 Environmental Management,

(f) Zone E4 Environmental Living.

(3) The size of any lot resulting from a subdivision of land to which this clause applies (other than any lot comprising association property within the meaning of the *Community Land Development Act 1989*) is not to be less than the minimum size shown on the Lot Size Map in relation to that land.

4.1A Maximum dwelling density in certain residential areas

(1) The objectives of this clause are as follows:

(a) to restrict the dwelling yield on certain land,

(b) to ensure that infrastructure is not overburdened,

(c) to provide for a diversity of dwelling types.

(2) This clause applies to land identified as "Restricted dwelling yield" on the Restricted Dwelling Yield Map.

(3) Despite clauses 4.1, 4.1AA, 4.1B and 4.1C, the total number of dwellings that may be created by the development of land specified in Column 1 of the table to this clause must not exceed the number specified in Column 2 of the table.

Column 1	Column 2
"Area 1" on the Restricted Dwelling Yield Map, being land at Airds-Bradbury	2104
"Area 2" on the Restricted Dwelling Yield Map, being land at Claymore	1490
"Area 3"on the Restricted Dwelling Yield Map, being land at the Western Sydney University	850

4.1B Minimum subdivision lot sizes for dual occupancies in certain zones

(1) The objectives of this clause are as follows:

(a) to achieve planned residential density in certain zones,

(b) to ensure that lot sizes are consistent with the predominant subdivision pattern of the area and maintain a low density residential character in existing neighbourhoods,

(c) to facilitate development applications seeking concurrent approval for dual occupancy development and subdivision,

(d) to prevent the fragmentation of land.

(2) Despite clause 4.1, development consent may be granted to development for the purpose of a dual occupancy if the development will be on a lot that is at least the minimum size shown on the Lot Size for Dual Occupancy Development Map in relation to that land.

(3) Despite clause 4.1 and subclause (2), development consent may be granted for the subdivision of land in Zone R2 Low Density Residential into lots that are less than the minimum lot size shown on the Lot Size Map in relation to that land if:

(a) there is an existing dual occupancy on the land that was lawfully erected under an environmental planning instrument or there is a development application for the concurrent approval of a dual occupancy and its subdivision into 2 lots, and

(b) the lot size of each resulting lot will be at least 300 square metres, and

(c) the subdivision will not result in more than one principal dwelling on each resulting lot.

4.1C Minimum qualifying site area and lot size for certain residential and child care centre development in residential zones

(1) The objectives of this clause are as follows:

(a) to achieve planned residential densities in certain zones,

(b) to achieve satisfactory environmental and infrastructure outcomes,

(c) to minimise any adverse impact of development on residential amenity,

(d) to minimise land use conflicts.

(2) Development consent may be granted to development for a purpose specified in the table to this clause on land in a zone listed beside the purpose, if the area of the lot is equal to or greater than the area specified in Column 3 of the table.

(3) Development consent may be granted to the subdivision of land in a zone that is specified in the table to this clause for a purpose listed beside the zone, if the area of the lot to be created is equal to or greater than the area specified in Column 4 of the table.

Column 1	Column 2	Column 3	Column 4
Dwelling house	Zone R2 Low Density Residential	500 square metres	500 square metres
Dual occupancy	Zone R2 Low Density Residential	700 square metres	300 square metres
Semi-detached dwelling	Zone R2 Low Density Residential	700 square metres	300 square metres
Attached dwelling	Zone R2 Low	1,000 square metres	300 square metres

	Density Residential		
Multi dwelling housing	Zone R2 Low Density Residential	1,000 square metres	300 square metres
Child care centres	Zone R2 Low Density Residential or Zone R3 Medium Density Residential	800 square metres	N/A
Residential flat buildings	Zone R4 High Density Residential	1,200 square metres	1,200 square metres

4.1D Minimum lot sizes for certain land uses in certain environment protection zones

(1) The objectives of this clause are as follows:

(a) to allow for certain non-residential land uses,

(b) to minimise any adverse impact on local amenity and the natural environment,

(c) to achieve satisfactory environmental and infrastructure outcomes,

(d) to minimise land use conflicts.

(2) This clause applies to land in the following zones:

(a) Zone E3 Environmental Management,

(b) Zone E4 Environmental Living.

(3) Development consent may be granted to development for a purpose specified in the table to this clause on land in a zone listed beside the purpose, if the area of the lot is equal to or greater than the area specified in the table.

Column 1	Column 2	Column 3
Animal boarding or training establishments	Zone E3 Environmental Management	5 hectares
Educational establishments	Zone E3 Environmental Management or Zone E4 Environmental Living	10 hectares
Places of public worship	Zone E3 Environmental Management	10 hectares

4.2 Rural subdivision

(1) The objective of this clause is to provide flexibility in the application of standards for subdivision in rural zones to allow land owners a greater chance to achieve the objectives for development in the relevant zone.

(2) This clause applies to the following rural zones:

(a) Zone RU1 Primary Production,

(b) Zone RU2 Rural Landscape,

(c) Zone RU4 Primary Production Small Lots,

(d) Zone RU6 Transition.

Note. When this Plan was made it did not include all of these zones.

(3) Land in a zone to which this clause applies may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Lot Size Map in relation to that land.

(4) However, such a lot cannot be created if an existing dwelling would, as the result of the subdivision, be situated on the lot.

(5) A dwelling cannot be erected on such a lot.

Note. A dwelling includes a rural worker's dwelling (see definition of that term in the Dictionary).

4.2A Erection of dwelling houses or dual occupancies (attached) on land in certain rural and environment protection zones

(1) The objectives of this clause are as follows:

(a) to enable the replacement of lawfully erected dwelling houses and dual occupancies (attached), and the realisation of dwelling entitlements in rural and environment protection zones,

(b) to restrict the extent of residential development in rural and environment protection zones to maintain the existing character,

(c) to recognise the contribution that development density in these zones makes to the landscape and environmental character of those places.

(2) This clause applies to land in the following zones:

(a) Zone RU2 Rural Landscape,

(b) Zone E3 Environmental Management,

(c) Zone E4 Environmental Living.

(3) Development consent must not be granted for the erection of a dwelling house or a dual occupancy (attached) on land to which this clause applies unless the land:

(a) is a lot that has at least the minimum lot size shown on the Lot Size Map in relation to that land, or

(b) is a lot created under this Plan (other than clause 4.2 (3)), or

(c) is a lot created under an environmental planning instrument before this Plan commenced and on which the erection of a dwelling house or a dual occupancy (attached) was permissible immediately before that commencement, or

(d) is a lot resulting from a subdivision for which development consent (or its equivalent) was granted before this Plan commenced and on which the erection of a dwelling house or a dual occupancy (attached) would have been permissible if the

plan of subdivision had been registered before that commencement, or

(e) is an existing holding, or

(f) would have been a lot or holding referred to in paragraph (a), (b), (c), (d) or (e) had it not been affected by:

(i) a minor realignment of its boundaries that did not create an additional lot, or

(ii) a subdivision creating or widening a public road or public reserve or for another public purpose, or

(iii) a consolidation with an adjoining public road or public reserve or for another public purpose.

Note. A dwelling cannot be erected on a lot created under clause 9 of *State Environmental Planning Policy (Rural Lands) 2008* or clause 4.2.

(4) Development consent must not be granted under subclause (3) unless:

(a) no dwelling house or dual occupancy (attached) has been erected on the land, and

(b) if a development application has been made for development for the purposes of a dwelling house or dual occupancy (attached) on the land—the application has been refused or it was withdrawn before it was determined, and

(c) if development consent has been granted in relation to such an application—the consent has been surrendered or it has lapsed.

(5) Development consent may be granted for the erection of a dwelling house or a dual occupancy (attached) on land to which this clause applies if there is a lawfully erected dwelling house or dual occupancy (attached) on the land and the dwelling house or dual occupancy (attached) proposed to be erected is intended only to replace the existing dwelling house or dual occupancy (attached).

(6) Development consent may be granted to convert a dwelling house into, or to replace a dwelling house with, a dual occupancy (attached) on land to which this clause applies if no dual occupancy (attached) exists on the land and the dual occupancy (attached) is designed and will be constructed to have the appearance of a single dwelling.

(7) In this clause:

existing holding means land that:

(a) was a holding on the relevant date, and

(b) is a holding at the time the application for development consent referred to in subclause (3) is lodged,

whether or not there has been a change in the ownership of the holding since the relevant date, and includes any other land adjoining that land acquired by the owner since the relevant date.

holding means all adjoining land, even if separated by a road or railway, held by the same person or persons.

relevant date means:

(a) in the case of land to which *Campbelltown (Urban Area) Local Environmental Plan 2002* applied immediately before the commencement of this Plan:

(i) for land identified as "25 February 1977" on the Former LEP and IDO Boundaries Map—25 February 1977, or

(ii) for land identified as "15 July 1977" on the Former LEP and IDO Boundaries Map—15 July 1977, or

(iii) for land identified as "3 November 1978" on the Former LEP and IDO Boundaries Map—3 November 1978, or

(b) in the case of land to which *Campbelltown Local Environmental Plan—District 8 (Central Hills Lands)* applied immediately before the commencement of this Plan—20 September 1974, or

(c) in the case of land to which *Campbelltown Local Environmental Plan No 1* applied immediately before the commencement of this Plan—26 June 1981, or

(d) in the case of land to which *Interim Development Order No 13—City of Campbelltown* applied immediately before the commencement of this Plan—20 September 1974, or

(e) in the case of land to which *Interim Development Order No 15—City of Campbelltown* applied immediately before the commencement of this Plan—27 September 1974, or

(f) in the case of land to which *Interim Development Order No 28—City of Campbelltown* applied immediately before the commencement of this Plan—3 November 1978.

Note. The owner in whose ownership all the land is at the time the application is lodged need not be the same person as the owner in whose ownership all the land was on the stated date.

4.2B Erection of rural workers' dwellings on land in Zones RU2 and E3

(1) The objectives of this clause are as follows:

(a) to facilitate, on the same land, the provision of adequate accommodation for employees involved in existing agricultural activities, including agricultural produce industries,

(b) to maintain the non-urban landscape and development characters of certain rural and environment protection zones.

(2) This clause applies to land in the following zones:

(a) Zone RU2 Rural Landscape,

(b) Zone E3 Environmental Management.

(3) Development consent must not be granted for the erection of a rural worker's dwelling on land to which this clause applies unless the consent authority is satisfied that:

(a) the development will be on the same lot as an existing lawfully erected dwelling house or dual occupancy (attached), and

(b) the development will not impair the use of the land for agricultural activities, including agricultural produce industries, and

(c) the agricultural activity or agricultural produce industry has an economic capacity to support the ongoing employment of rural workers, and

(d) the development is necessary considering the nature of the existing or proposed agricultural activity or agricultural produce industry occurring on the land or as a result of the remote or isolated location of the land, and

(e) there will be not more than one rural worker's dwelling on the lot, and

(f) the development will be a single storey building with a maximum floor area of 120 square metres or not more than 20% of the floor area of any existing dwelling house on that land, whichever is greater.

4.2C Exceptions to minimum subdivision lot sizes for certain land in Zones RU2 and E3

(1) The objective of this clause is to allow the owners of certain land to which the following environmental planning instruments applied to excise a home-site area from an existing lot (or existing holding) by the means of a subdivision:

(a) *Campbelltown Local Environmental Plan No 1*,

(b) *Interim Development Order No 15—City of Campbelltown.*

(2) Subclause (3) applies to each lot to which *Campbelltown Local Environmental Plan No 1* applied immediately before its repeal that:

(a) was in existence on 26 June 1981, and

(b) is in Zone E3 Environmental Management, and

(c) has an area of at least 10 hectares.

(3) Development consent must not be granted to the subdivision of the land to which this subclause applies unless the proposed subdivision will result in the creation of only 2 lots, each of which must have an area of at least 2 hectares.

(4) Subclause (5) applies to each lot to which *Interim Development Order No 15—City of Campbelltown* applied immediately before its repeal that:

(a) was in existence on 18 July 1973, and

(b) is in Zone RU2 Rural Landscape.

(5) Development consent must not be granted to the subdivision of the land to which this subclause applies unless the smallest lot to be created has an area of at least 2 hectares and is required for the erection of a dwelling house for occupation by:

(a) the person who owned the land on 18 July 1973, or

(b) a relative of that owner, or

(c) a person employed or engaged by that owner in the use of land of the owner adjoining or adjacent to that lot for the purpose of agriculture.

(6) The total number of lots that may be created by the subdivision of land to which subclause (5) applies, whether by one or more subdivisions, must not exceed:

(a) if the land to be subdivided had an area of less than 10 hectares—nil, or

(b) if the land to be subdivided had an area of at least 10 hectares but less than 40 hectares—1, or

(c) if the land to be subdivided had an area of at least 40 hectares but less than 80 hectares—2, or

(d) if the land to be subdivided had an area of at least 80 hectares—3.

4.2D Exceptions to minimum subdivision lot sizes for certain land in Zone E4

(1) The objective of this clause is to permit the subdivision of certain land in the East Edge Scenic Protection Lands Area to create lots of a size that are less than the minimum lot size shown on the Lot Size Map in relation to that land.

(2) This clause applies to land identified as "1 ha" on the Lot Averaging Map.

(3) Despite clause 4.1, development consent may be granted to the subdivision of land to which this clause applies if the subdivision will not create a number of lots that is more than the number resulting from multiplying the total area of the land being subdivided by the maximum density control number specified on the Lot Averaging Map in relation to that land.

(4) Development consent must not be granted under this clause unless the consent authority is satisfied that:

(a) the pattern of lots created by the subdivision, the provision of access and services and the location of any future buildings on the land will not have a significant detrimental impact on native vegetation, and

(b) each lot to be created by the subdivision contains a suitable land area for:

(i) a dwelling house, and

(ii) an appropriate asset protection zone relating to bush fire hazard, and

(iii) if reticulated sewerage is not available to the lot—on-site sewage treatment, management and disposal, and

(iv) other services related to the use of the land for residential occupation, and

(c) if reticulated sewerage is not available to the lot—a geotechnical assessment demonstrates to the consent

authority's satisfaction that the lot can suitably accommodate the on-site treatment, management and disposal of effluent, and

(d) adequate arrangements are in place for the provision of infrastructure to service the needs of development in the locality.

NOTE: A copy of the complete written instrument for the Campbelltown Local Environmental Plan 2015 is available on the NSW Legislation website at: http://www.legislation.nsw.gov.au

NSW SafeWork NSW Records

KT

12 JUL 2016

NSW GOVERNMENT | SafeWork NSW

SafeWork NSW
92-100 Donnison Street, Gosford, NSW, 2250
Locked Bag 2906, Lisarow, NSW, 2252 |
Customer Service Centre **13 10 50**
licensing@safework.nsw.gov.au | www.safework.nsw.gov.au

Our Ref: D16/622834
Your ref: Katrina Taylor

8 July 2016

Attention: Katrina Taylor
Environmental Investigation Services
PO BOX 976
North Ryde BC NSW 1670

Dear Ms Taylor,

RE SITE: 7 Montore Rd Minto NSW

I refer to your site search request received by SafeWork NSW on 19 June 2016 requesting information on Storage of Hazardous Chemicals for the above site.

A search of the records held by SafeWork NSW has not located any records pertaining to the above mentioned premises.

For further information or if you have any questions, please call our Customer Service Centre on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely,

Brent Jones
Customer Service Officer
Customer Service Centre - Operations
SafeWork NSW

Lotsearch Environmental Risk Planning Report

Lotsearch

Environmental Risk and Planning Report

7 Montore Road, Minto, NSW 2566

Report Buffer: 1000m

Report Date: 27 May 2016 16:02:39

Table of Contents

Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading LC. These codes lookup to the following location confidences:

LC Code	Location Confidence
1	Geocoded to the site location / premise or part of site
2	Geocoded with the confidence of the general/wider area
3	Geocoded to the road or rail
4	Geocoded to the road intersection
5	Feature is a buffered point
6	Land adjacent to Geocoded Site
7	Geocoded to a network of features

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Land and Property Information	27/05/2016	27/05/2016	Daily	-	-	-
Topographic Data	Land and Property Information	10/04/2015	01/04/2015	As required	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	20/05/2016	14/04/2016	Monthly	0	0	0
Contaminated Land: Records of Notice	Environment Protection Authority	24/05/2016	24/05/2016	Monthly	0	0	0
Former Gasworks	Environment Protection Authority	24/05/2016	10/05/2013	Monthly	0	0	0
National Waste Management Site Database	Geoscience Australia	11/04/2016	15/11/2012	Quarterly	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	16/05/2016	16/05/2016	Monthly	0	3	15
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	16/05/2016	16/05/2016	Monthly	0	0	1
Former POEO Licenced Activities now revoked or surrendered	Environment Protection Authority	16/05/2016	16/05/2016	Monthly	1	7	12
UPSS Environmentally Sensitive Zones	Department of Environment, Climate Change and Water (NSW)	14/04/2015	12/01/2010	As required	1	1	1
UBD Business to Business Directory 1991	Hardie Grant			Not required	0	8	8
UBD Business Directory 1991 Motor Garages/Service Stations	Hardie Grant			Not required	0	0	0
Points of Interest	Land and Property Information	10/04/2015	01/04/2015	Annually	0	0	24
Tanks (Areas)	Land and Property Information	10/04/2015	01/04/2015	Annually	0	0	0
Tanks (Points)	Land and Property Information	10/04/2015	01/04/2015	Annually	0	0	0
Easements	Land and Property Information	08/10/2014	08/10/2014	As required	0	0	9
State Forest	Land and Property Information	11/04/2016	23/01/2015	As required	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment and Heritage	11/04/2016	31/12/2015	Annually	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1	1	1
Groundwater Boreholes	NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation; Commonwealth of Australia (Bureau of Meteorology) 2015	21/03/2016	01/12/2015	Quarterly	0	0	4
Geological Units 1:100,000	NSW Department of Industry, Resources & Energy	20/08/2014		None planned	2	-	4
Geological Structures 1:100,000	NSW Department of Industry, Resources & Energy	20/08/2014		None planned	0	-	0
Soil Landscapes	NSW Office of Environment and Heritage	12/08/2014		None planned	1	-	2
Acid Sulfate Soils	NSW Planning and Environment	04/01/2016	19/09/2008	As required	0	-	-
Dryland Salinity Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	0	0	0
Mining Subsidence Districts	Land and Property Information	27/05/2016	27/05/2016	As required	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	04/05/2015	01/05/2015	Annually	0	0	0
Local Environmental Plan - Land Zoning	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	1	3	48
Local Environmental Plan - Minimum Subdivision Lot Size	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	1	-	-

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Local Environmental Plan - Height of Building	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	1	-	-
Local Environmental Plan - Floor Space Ratio	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	0	-	-
Local Environmental Plan - Land Application	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	1	-	-
Local Environmental Plan - Land Reservation Acquisition	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	0	-	-
State Heritage Items	NSW Planning and Environment	16/05/2016	12/03/2015	Quarterly	0	0	0
Local Heritage Items	NSW Planning and Environment	16/05/2016	17/04/2016	Quarterly	0	0	2
Bushfire Prone Land	NSW Rural Fire Service	04/01/2016	11/12/2015	Quarterly	0	0	2
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment and Heritage	08/10/2014	11/10/2013	As required	1	1	6
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	0	0	0
ATLAS of NSW Wildlife	NSW Office of Environment and Heritage	27/05/2016	27/05/2016	Daily	-	-	-

Aerial Imagery 2015

7 Montore Road, Minto, NSW 2566

Scale: 0 25 50 100 Meters	Data Sources: Aerial Imagery © 2016 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 28May 2016

Contaminated Land & Waste Management Facilities

7 Montore Road, Minto, NSW 2566

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the report buffer:

Map Id	Site	Address	Suburb	Activity	EPA site management class	Status	Dist	Direction	LC
N/A	No records in buffer								

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land & Waste Management Facilities

7 Montore Road, Minto, NSW 2566

Contaminated Land: Records of Notice

Record of Notices within the report buffer:

Map Id	Area No	Name	Address	Suburb	Notices	Distance	Direction	LC
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority

Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the report buffer:

Map Id	Location	Council	Further Info	Distance	Direction	LC
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority

National Waste Management Site Database

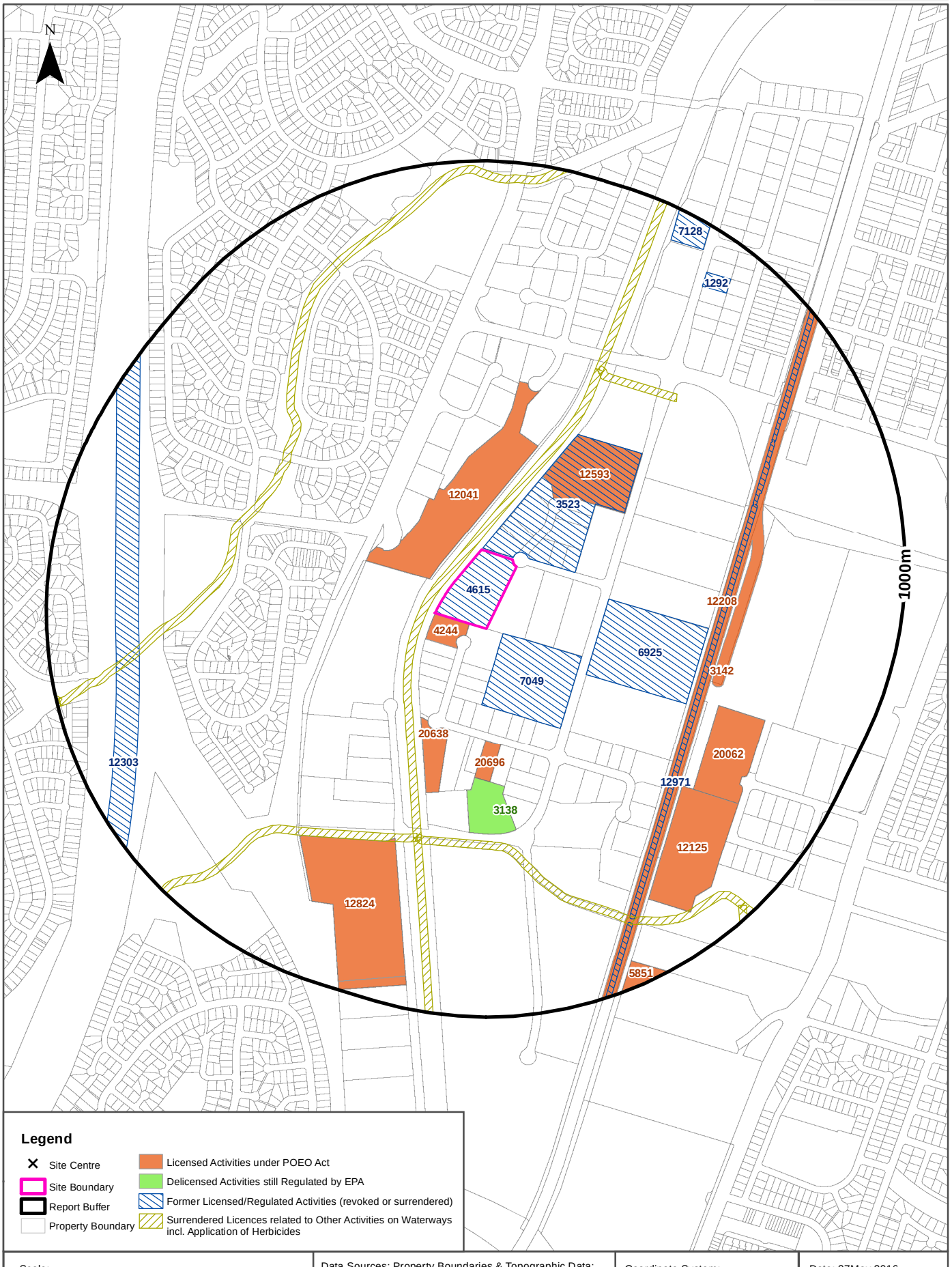
Sites on the National Waste Management Site Database within the report buffer:

Site Id	Owner	Name	Address	Suburb	Postcode	Landfill	Reprocess	Transfer	Distance	Direction	LC
N/A	No records in buffer										

Wate Management Facilities Data Source: Australian Governement Geoscience Australia

EPA Activities

7 Montore Road, Minto, NSW 2566



EPA Activities

7 Montore Road, Minto, NSW 2566

Licensed Activities under the POEO Act 1997

Licensed activities under the Protection of the Environment Operations Act 1997, within the report buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
4244	FOAMCO INDUSTRIES PTY LIMITED	FOAMCO INDUSTRIES PTY LTD	27-29 Pembury Road	MINTO	Plastic resins production	1	0m	South West
12041	REDOX PTY LTD	REDOX PTY LTD	2 SWETTENHAM ROAD	MINTO	Chemical storage waste generation	1	57m	North
12041	REDOX PTY LTD	REDOX PTY LTD	2 SWETTENHAM ROAD	MINTO	General chemicals storage	1	57m	North
12593	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	INGAL CIVIL PRODUCTS	57-65 Airds Road	MINTO	Metal coating	1	188m	North East
12593	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	INGAL CIVIL PRODUCTS	57-65 Airds Road	MINTO	Metal waste generation	1	188m	North East
20638	Minto Recycling Pty Ltd		13 Pembury road	MINTO, NSW 2566	Non-thermal treatment of general waste	1	266m	South
20696	ENVIRONMENTAL TREATMENT SOLUTIONS PTY LTD		Warehouse B, 7 Pembury Road	MINTO, NSW 2566	Waste Storage - Hazardous, Restricted Solid, Liquid, Clinical and Related Waste and Asbestos Waste	1	287m	South
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		NSW rail network infrastructure		Railway systems activities	3	527m	South West
12208	SYDNEY TRAINS		Sydney Trains (RailCorp) network		Railway systems activities	3	527m	North East
12824	TOYO TYRE & RUBBER AUSTRALIA LIMITED	TOYO TYRE AND RUBBER	137-149 AIRDS ROAD	MINTO	General chemicals storage	1	584m	South
12824	TOYO TYRE & RUBBER AUSTRALIA LIMITED	TOYO TYRE AND RUBBER	137-149 AIRDS ROAD	MINTO	Rubber products/tyre production	1	584m	South
20062	CARGILL MALT ASIA PACIFIC PTY LTD	JOE WHITE MALTINGS PTY LTD	11 STONNY BATTER ROAD	MINTO	General agricultural processing	1	623m	South East
12125	LIPA PHARMACEUTICALS LTD	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD	MINTO	Chemical production waste generation	1	645m	South East
12125	LIPA PHARMACEUTICALS LTD	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD	MINTO	Pharmaceutical and veterinary products production	1	645m	South East
5851	UNILEVER AUSTRALIA TRADING LIMITED	STREETS ICE CREAM	2 Magnum Place	MINTO	Dairy processing	1	932m	South East

POEO Licence Data Source: Environment Protection Authority

EPA Activities

7 Montore Road, Minto, NSW 2566

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the report buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
3138	FULTON HOGAN CONSTRUCTION PTY LTD	FULTON HOGAN PTY LTD	117 AIRDS ROAD	MINTO	Bitumen mixing	1	384m	South

Delicensed Activities Data Source: Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

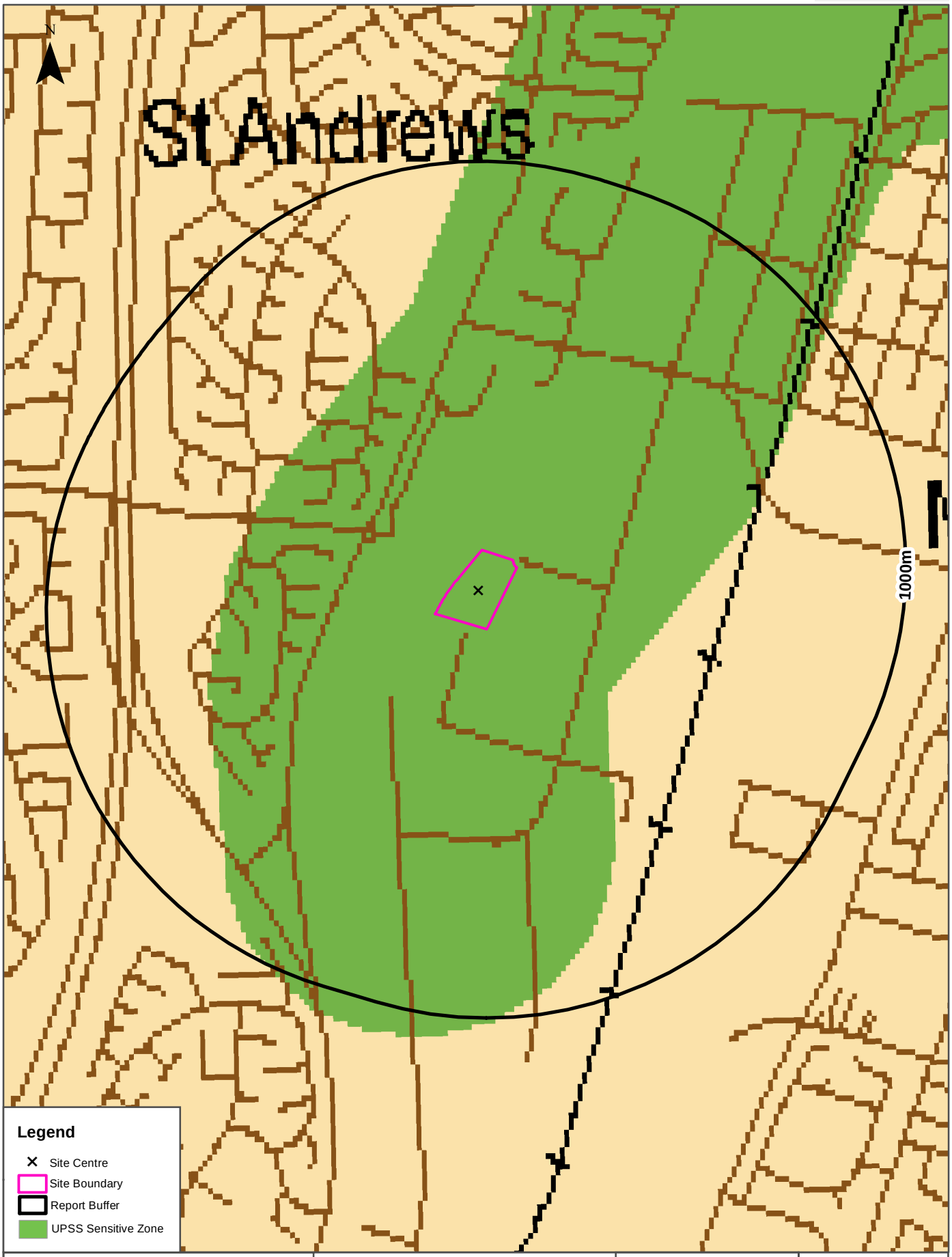
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the report buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4615	M & C PTY LTD	LOT 52 MONTORE ROAD, MINTO, NSW 2566	Surrendered	18/05/2000	Waste Storage, Transfer, Separating or Processing	1	0m	Onsite
3523	CAPRAL LIMITED	57-65 AIRDS ROAD, MINTO, NSW 2566	Surrendered	14/08/2000	Metal processing; Hazardous, Hazardous, Industrial or Group A Waste Generation or Storage	1	4m	North East
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	15m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	15m	-
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	15m	-
6651	CAMPBELLTOWN CITY COUNCIL	WATERWAYS OF CAMPBELLTOWN CITY COUNCIL AREA - CAMPBELLTOWN NSW 2560	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	15m	-
7049	VOLVO TRUCK AUSTRALIA PTY LTD	91-101 AIRDS ROAD, MINTO, NSW 2566	Surrendered	12/10/2000	Petroleum products storage, Hazardous, Industrial or Group A Waste Generation or Storage	1	44m	South East
6925	OTIS ELEVATOR COMPANY PTY LTD	50 AIRDS ROAD, MINTO, NSW 2566	Surrendered	15/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	251m	East
12971	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Amy Street Berala to Menangle Road Glen Alpine , BERALA, NSW 2141	Surrendered	26/11/2008	Railway systems activities	3	537m	North East
12303	ROADS AND MARITIME SERVICES	Between Brooks Road, Ingleburn and Narellan Road, Blair Athol, INGLEBURN, NSW 2565	Surrendered	20/04/2005		3	763m	West
1292	LE-RO DIECASTERS PTY LTD	24-26 AIRDS ROAD, MINTO, NSW 2566	Surrendered	15/08/2000	Metal processing	1	856m	North East
7128	BOSCO MANUFACTURING PTY LTD	17-23 AIRDS ROAD, MINTO, NSW 2566	Surrendered	28/09/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	918m	North East

Former Licensed Activities Data Source: Environment Protection Authority

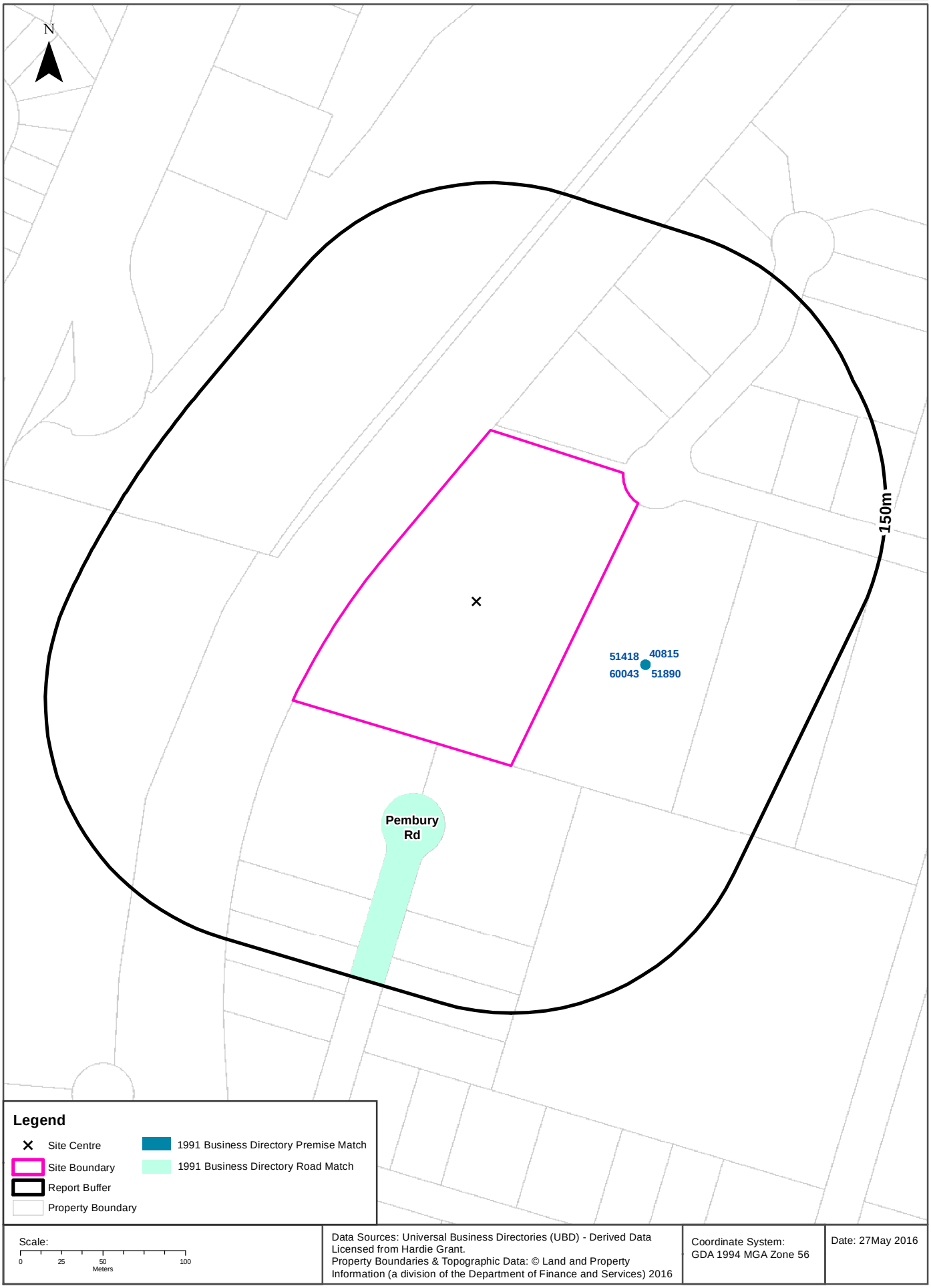
UPSS Sensitive Zones

7 Montore Road, Minto, NSW 2566



1991 Historical Business Directory Records

7 Montore Road, Minto, NSW 2566



Historical Business Directories

7 Montore Road, Minto, NSW 2566

1991 Business to Business Directory Records

Records from the 1991 UBD Business to Business Directory within 150m of the site:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Fork Lift Truck Hirers	Forkhire	Pembury Rd Minto NSW 2560	46309	Road Match	32m	South
Fork Lift Truck Mfrs &/or Imps &/or Dists	Forklifts	Pembury Rd Minto NSW 2560	46329	Road Match	32m	South
Gravel, Sand &/or Soil Supplies	Minto Sand & Soil	Lot 7 Pembury Rd Minto 2566	47961	Road Match	32m	South
Plastic Moulders	Reln Plastics	Pembury Rd Minto 2566	58070	Road Match	32m	South
Quarrying Machinery &/or Equipment Mfrs &/or Dists	Meco McCallum Pty Ltd	Lot 51 Montore Rd Minto 2566	60043	Building Match	45m	East
Conveyor &/or Conveying Equip Mfrs &/or Imps &/or Dists	Meco McCallum Pty. Ltd.	Lot 51, Montore Rd., Minto. 2566	40815	Building Match	45m	East
Material Handling Equipment Mfrs &/or Imps &/or Dists	Meco McCallumm Pty Ltd	Lot 51 Montore Rd Minto 2566	51418	Building Match	45m	East
Mining Machinery &/or Equipment Mfrs &/or Imps &/or Dists	Meco McCallumm Pty Ltd	Montore Rd Minto 2566	51890	Building Match	45m	East

1991 Business Directory Motor Garages & Service Stations

Motor Garages & Service Stations from the 1991 UBD Business Directory within 1km of the site:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
N/A	No records in buffer					

Aerial Imagery 2014

7 Montore Road, Minto, NSW 2566

Scale:	Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 28May 2016

Aerial Imagery 2009

7 Montore Road, Minto, NSW 2566

Scale:
0 25 50 100
Meters

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 28May 2016

Aerial Imagery 2006

7 Montore Road, Minto, NSW 2566

Scale:
0 25 50 100
Meters

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 28May 2016

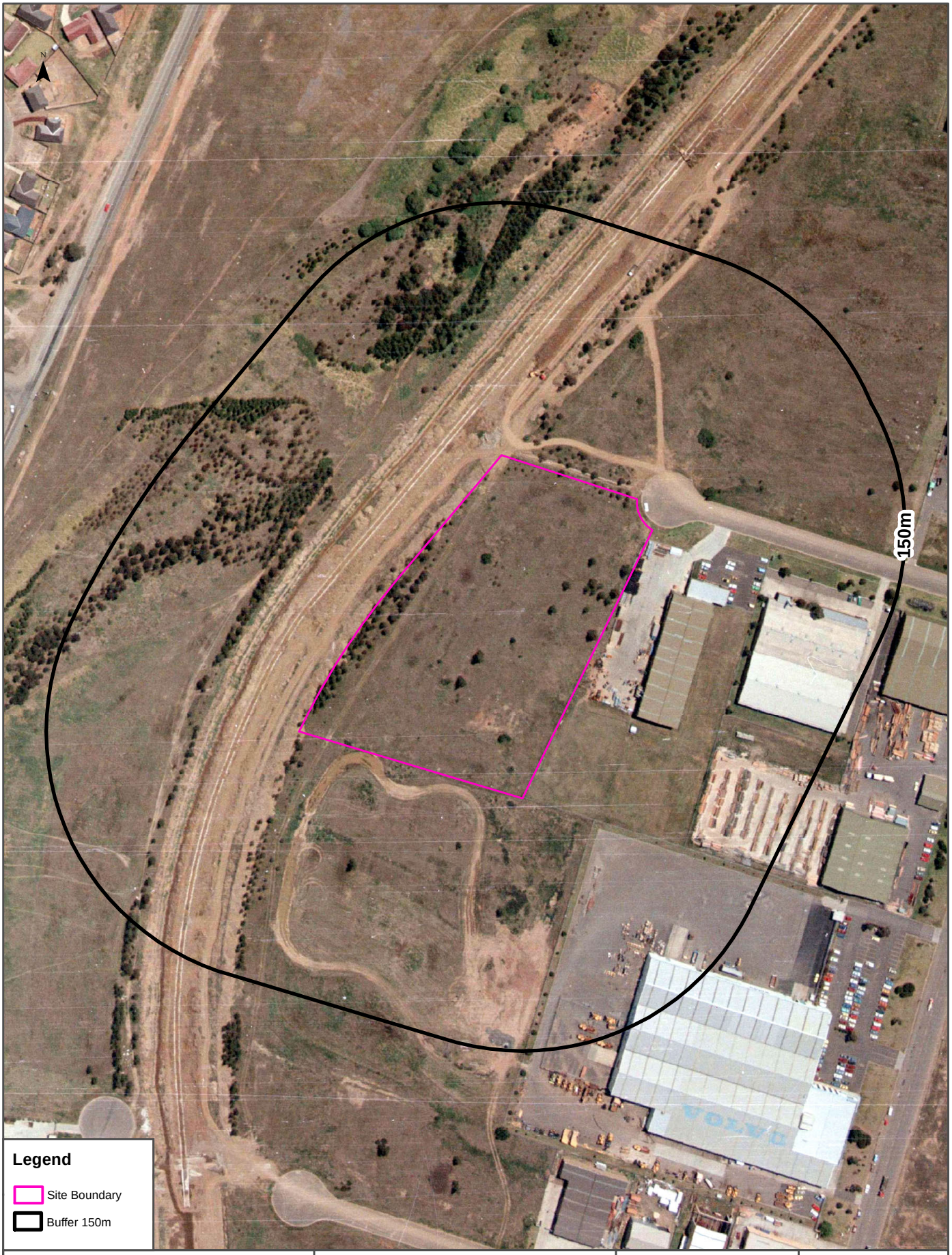
Aerial Imagery 1994

7 Montore Road, Minto, NSW 2566

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 27May 2016

Aerial Imagery 1984

7 Montore Road, Minto, NSW 2566



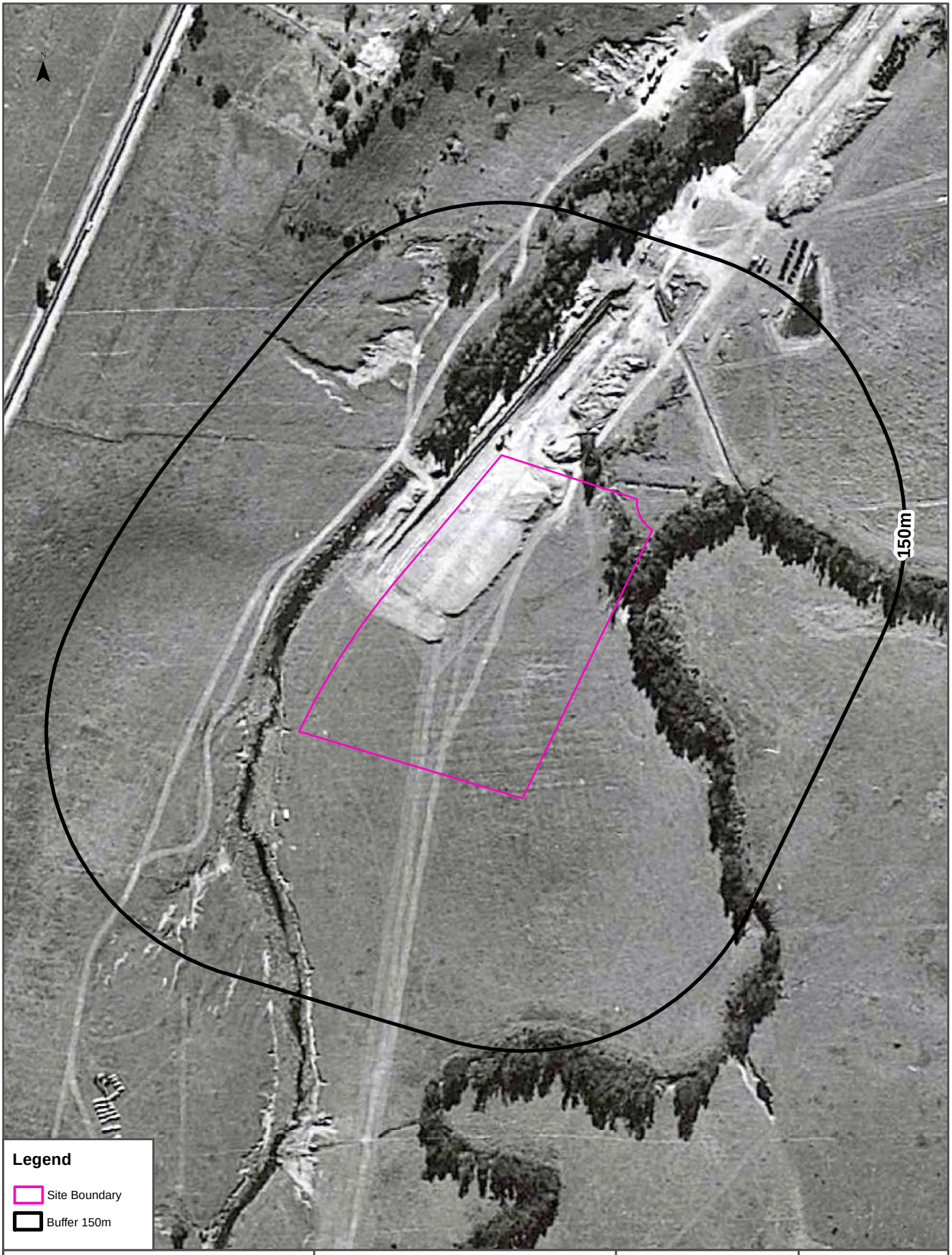
Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Aerial Imagery 1970

7 Montore Road, Minto, NSW 2566



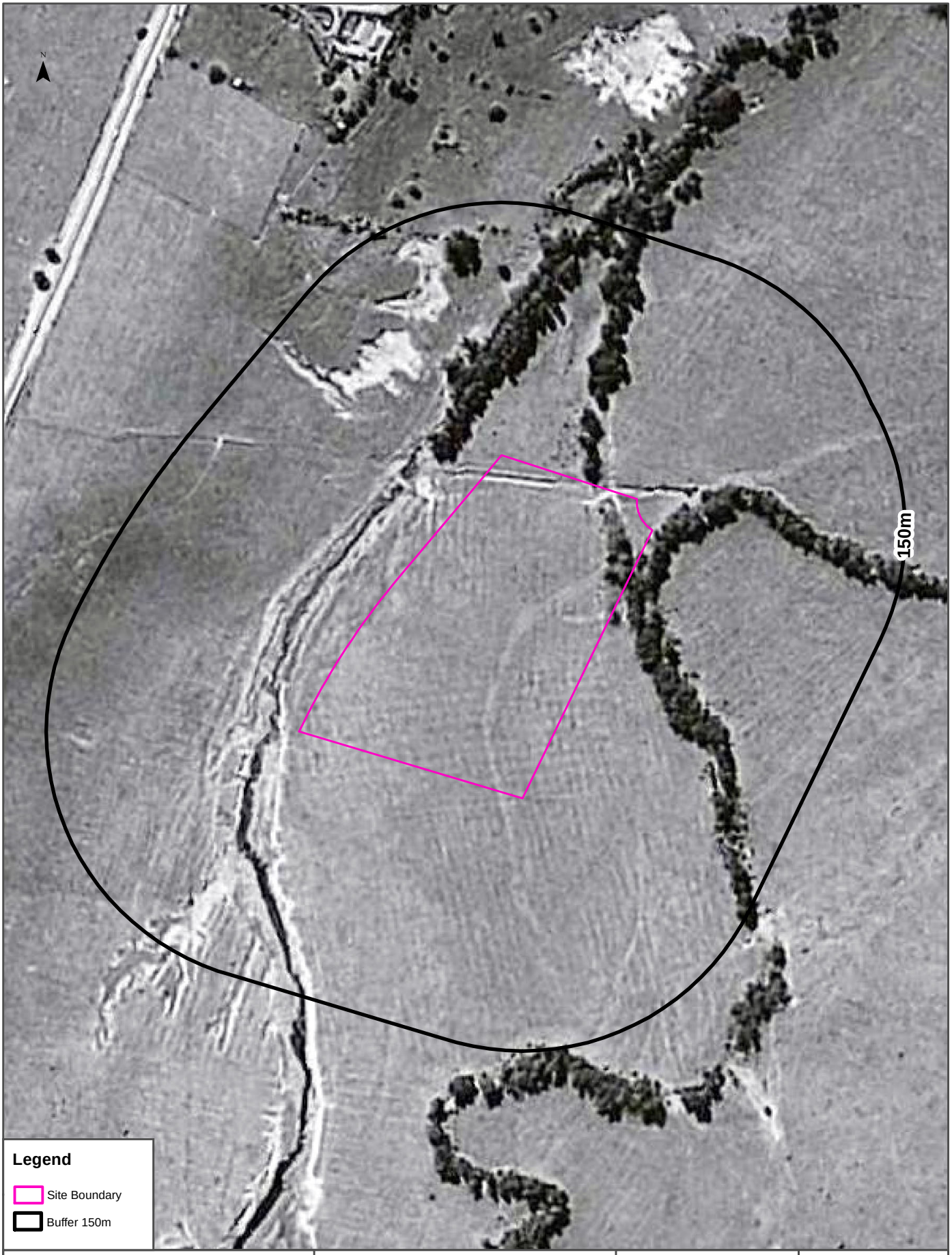
Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Aerial Imagery 1965

7 Montore Road, Minto, NSW 2566



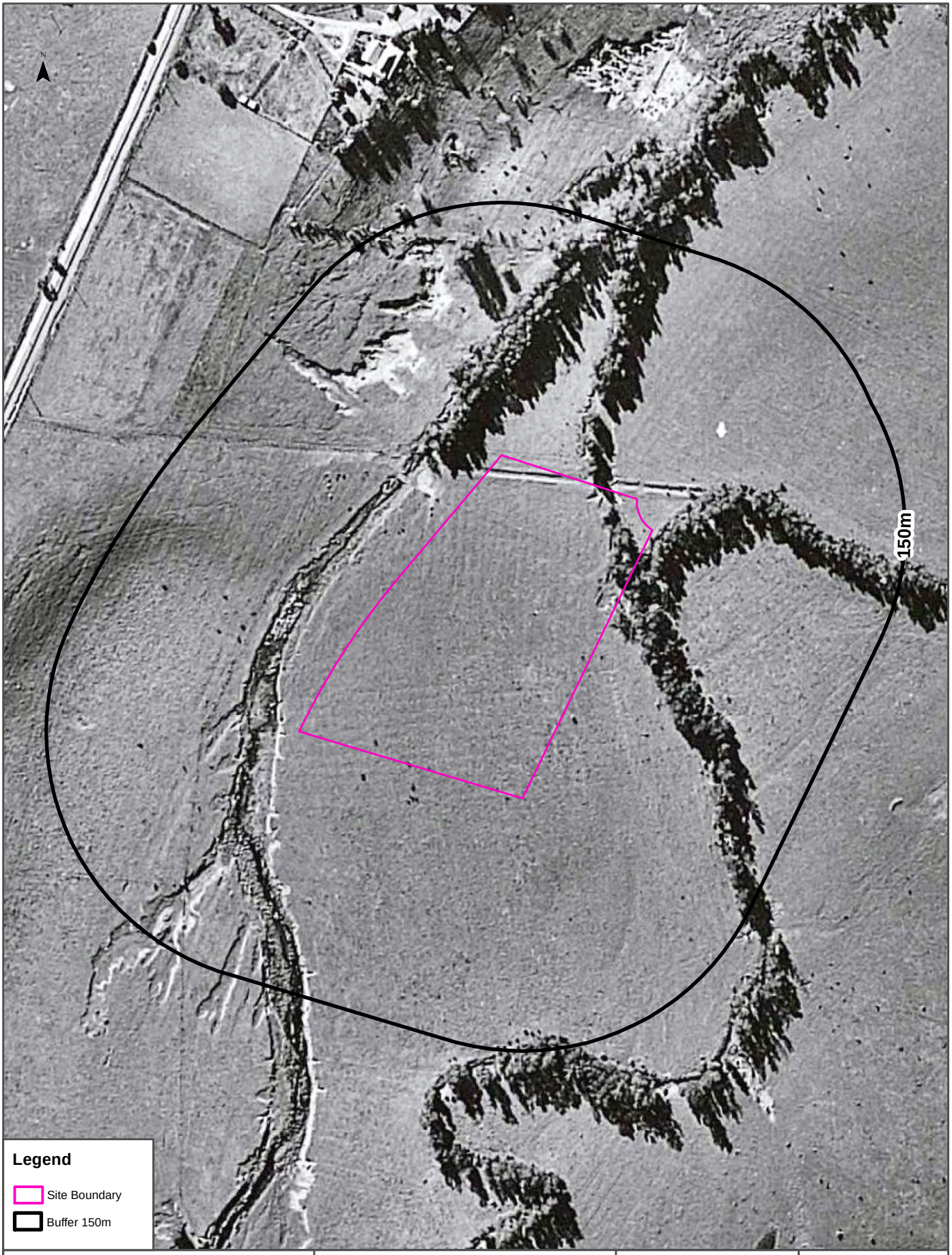
Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Aerial Imagery 1961

7 Montore Road, Minto, NSW 2566



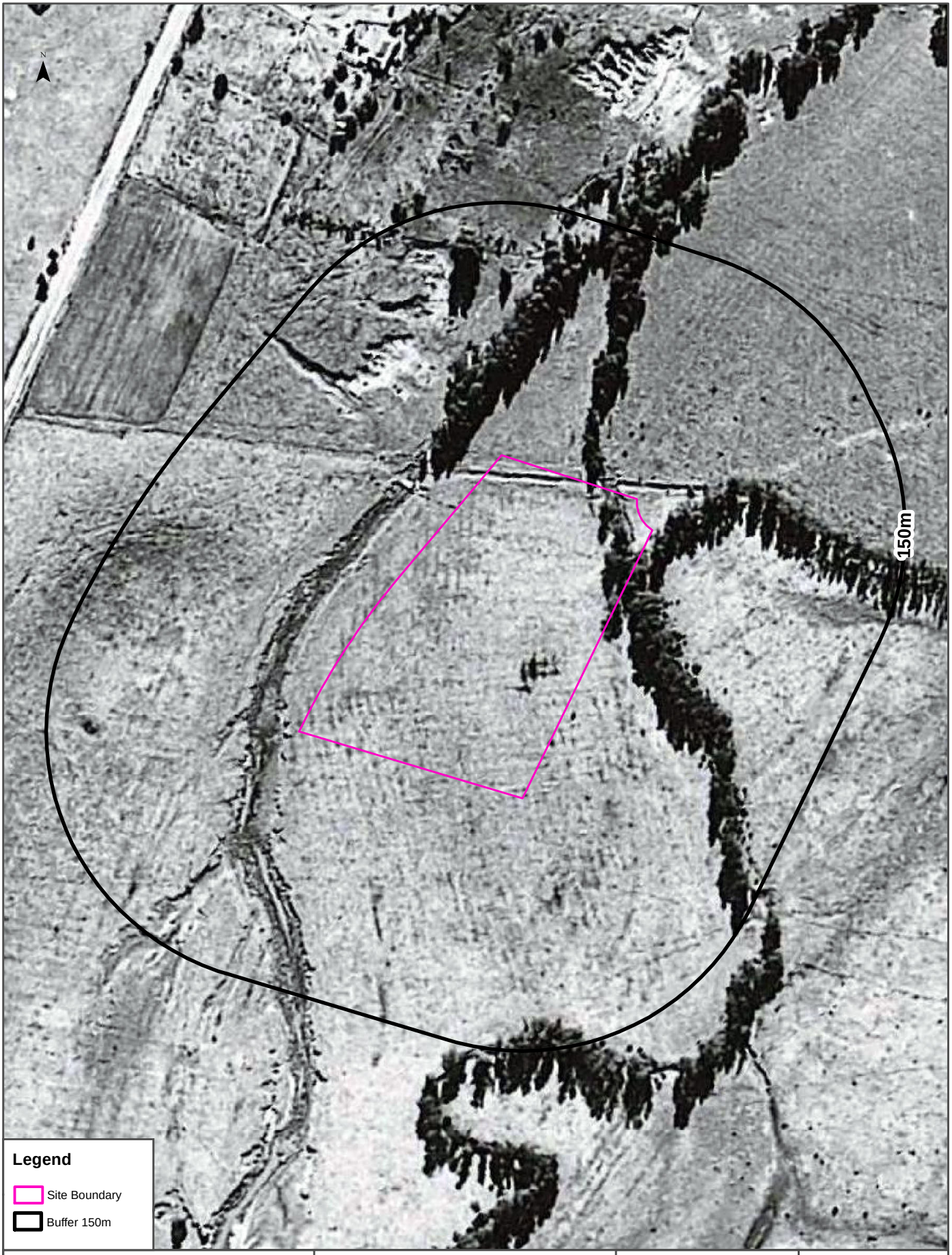
Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Aerial Imagery 1956

7 Montore Road, Minto, NSW 2566



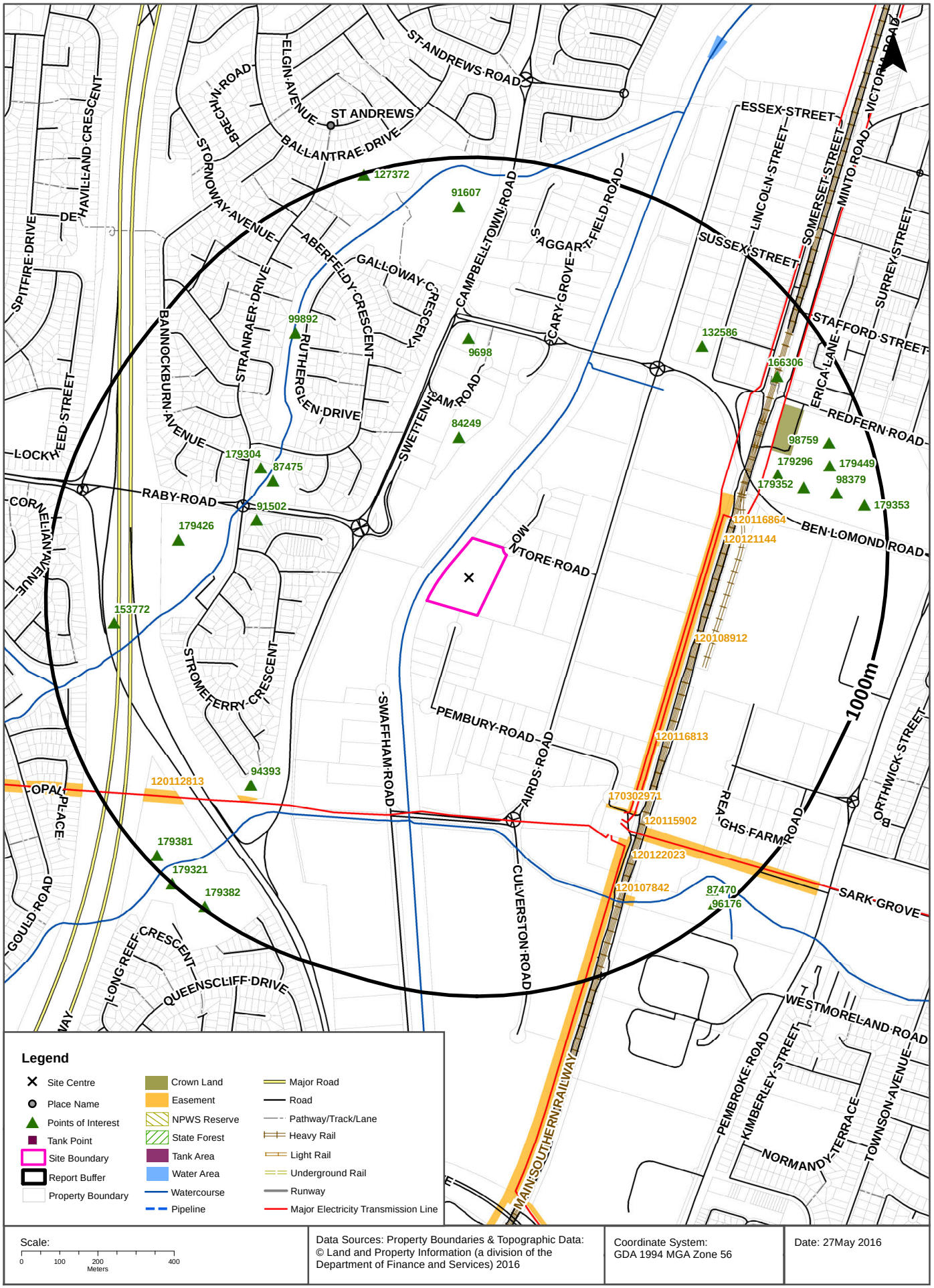
Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Topographic Features

7 Montore Road, Minto, NSW 2566



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2016

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Topographic Features

7 Montore Road, Minto, NSW 2566

Points of Interest

What Points of Interest exist within the report buffer?

Map Id	Feature Type	Label	Distance	Direction
84249	Motor Racing Track	FAST LANE GO KART CENTRE	268m	North
91502	Park	MUMU RESERVE	494m	West
87475	Park	STRANRAER RESERVE	507m	North West
9698	Fire Station	ST ANDREWS FIRE STATION	526m	North
179304	Nursing Home	ST ANDREWS COMMUNITY CENTRE	552m	North West
94393	Park	PEACE PARK	669m	South West
179426	Sports Field	STROMFERRY RESERVE	671m	West
99892	Sports Field	SAGGART FIELD	712m	North West
179296	Sports Centre	MINTO INDOOR SPORTS CEMTRE	742m	East
132586	Post Office	MINTO POST OFFICE	744m	North East
179352	Sports Court	NETBALL COURTS	799m	East
153772	Roadside Emergency Telephone	116	822m	West
166306	Railway Station	MINTO RAILWAY STATION	848m	North East
91607	Park	ST ANDREWS PARK	872m	North
179449	Sports Court	CORONATION PARK NETBALL COMPLEX	879m	East
98379	Sports Court	NETBALL COURTS	880m	East
98759	Sports Court	NETBALL COURTS	895m	East
96176	Picnic Area	Picnic Area	948m	South East
179353	Sports Court	NETBALL COURTS	948m	East
179381	Sports Field	CRICKET SOCCER FIELDS	973m	South West
87470	Park	PEMBROKE PARK	979m	South East
179382	Sports Field	CRICKET SOCCER FIELDS	992m	South West
127372	Primary School	ST ANDREWS PUBLIC SCHOOL	997m	North
179321	Sports Court	CRICKET NETS	999m	South West

Tanks (Areas)

What are the Tank Areas located within the report buffer?

Map Id	Tank Type	Status	Name	Capture Method	Feature Currency	Distance	Direction
N/A	No records in buffer						

Topographic Features

7 Montore Road, Minto, NSW 2566

Tanks (Points)

What are the Tank Points located within the report buffer?

Map Id	Tank Type	Status	Name	Capture Method	Feature Currency	Distance	Direction
N/A	No records in buffer						

Easements

What Easements exist within the report buffer?

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120116864	Primary	Undefined		497m	East
120108912	Primary	Undefined		501m	South East
120121144	Primary	Undefined		543m	East
120116813	Primary	Undefined		559m	South East
170302971	Primary	Right of way	6.8m & Var	601m	South East
120112813	Primary	Undefined		686m	West
120122023	Primary	Undefined		694m	South
120115902	Primary	Undefined		714m	South East
120107842	Primary	Undefined		833m	South East

State Forest

What State Forest exist within the report buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

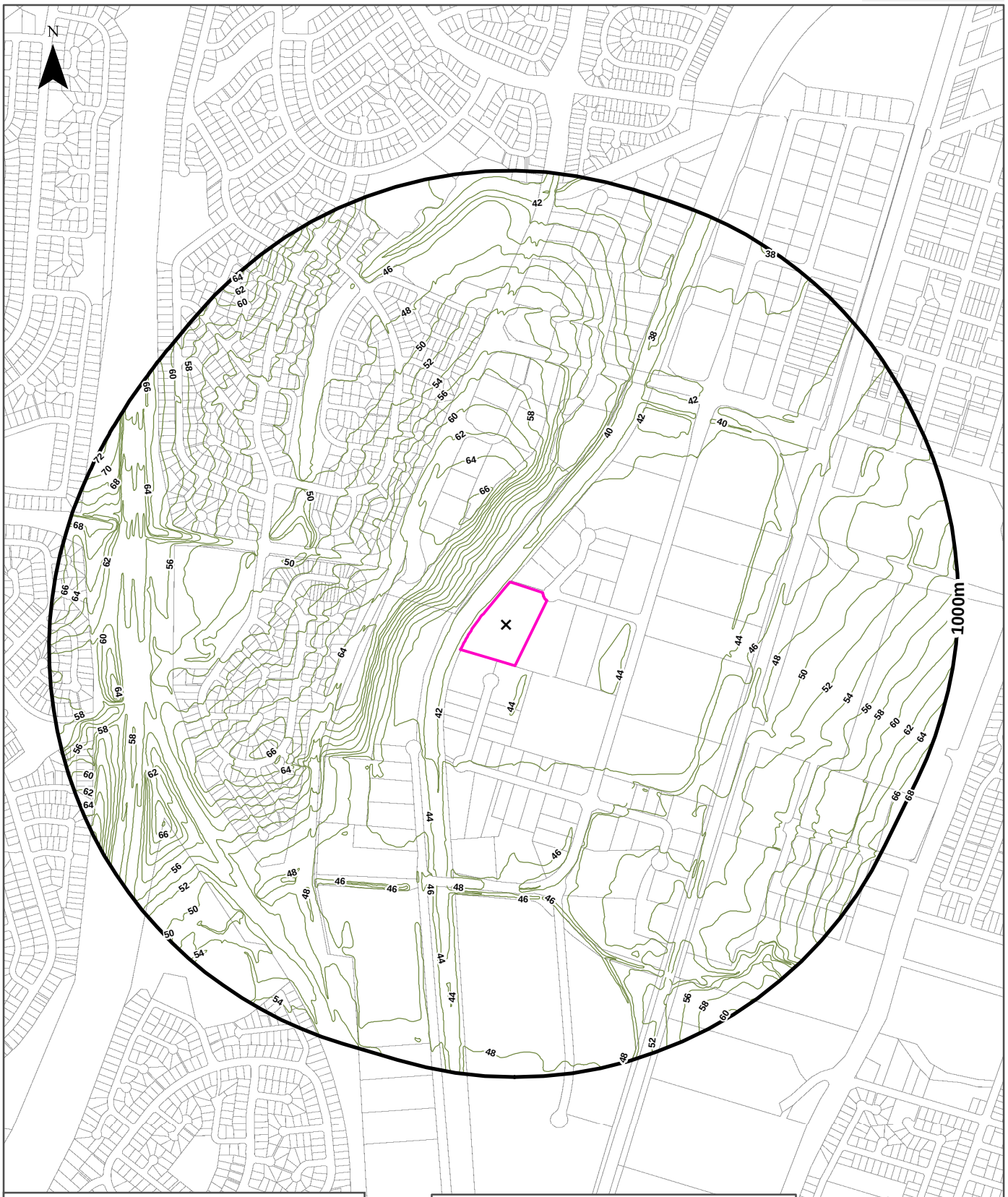
National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the report buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

Elevation Contours (m AHD)

7 Montore Road, Minto, NSW 2566



Legend

- Site Centre
- Elevation Contour (m AHD)
- Site Boundary
- Report Buffer
- Property Boundary

Accuracy & Currency: This contour data can be up to 0.4 of the contour interval out in height and must therefore not be used for any design or engineering works, but only as a general guide to topography. Gaps may occur along contour lines due to vertical topography, obscured topography in the source photography such as buildings, dense vegetation or dead ground, or the fact that original buildings have been replaced in the intervening thirty years since the original contour capture.

Scale: 0 100 200 400 Meters

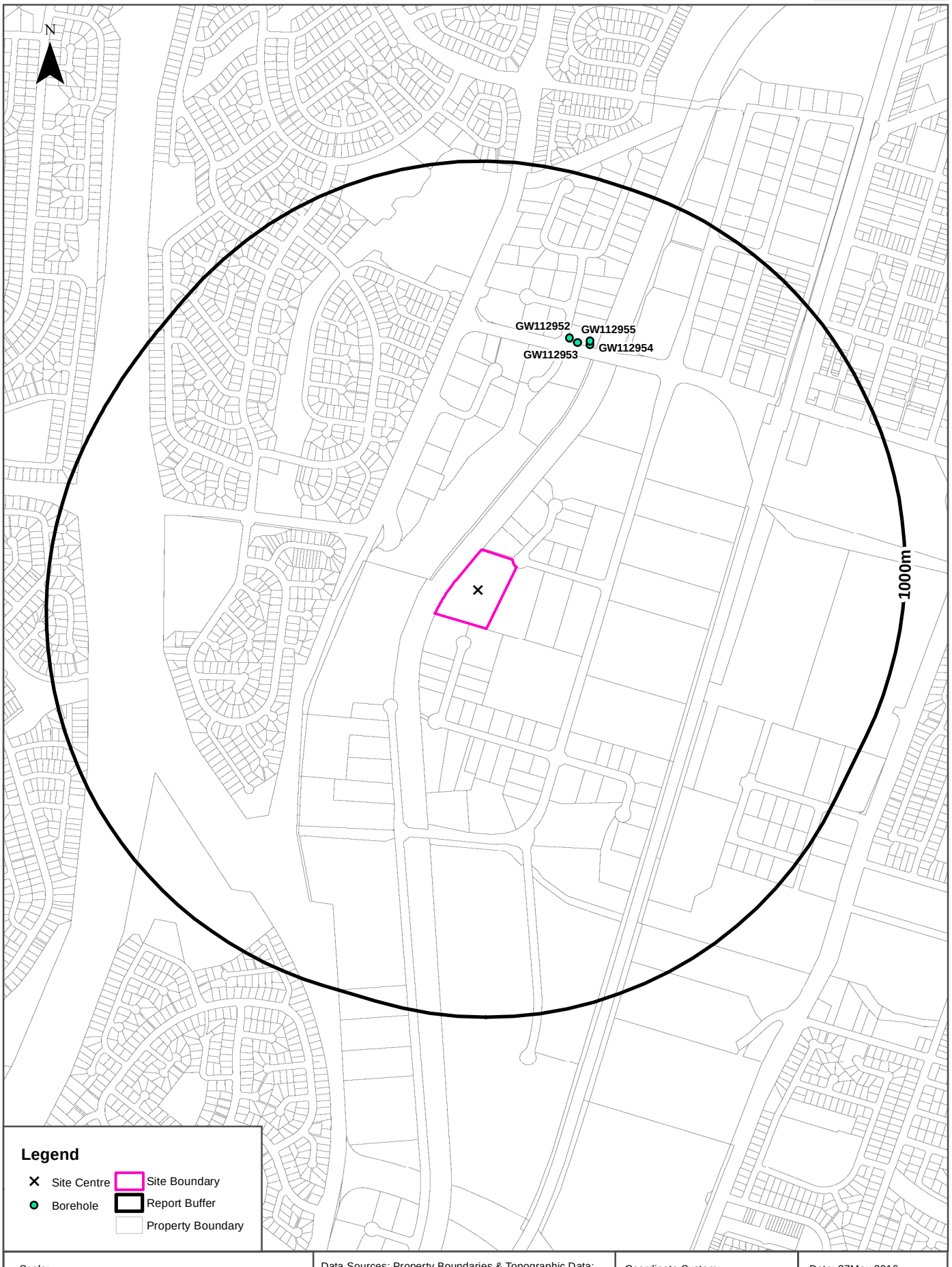
Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2016

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Groundwater Boreholes

7 Montore Road, Minto, NSW 2566



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2016

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Hydrogeology & Groundwater

7 Montore Road, Minto, NSW 2566

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive aquifers of low to moderate productivity

Description of aquifers within the report buffer:

Description
Porous, extensive aquifers of low to moderate productivity

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)

Groundwater Boreholes

Boreholes within the report buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW112953	10BL603153	Bore	Private	Monitoring		01/06/2009	8.00	8.00					583m	North
GW112954	10BL603153	Bore	Private	Monitoring		01/06/2009	7.79	7.79					587m	North East
GW112952	10BL603153	Bore	Private	Monitoring		01/06/2009	8.20	8.20					588m	North
GW112955	10BL603153	Bore	Private	Monitoring		01/06/2009	6.76	6.76					597m	North East

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores

Driller's Logs

Drill log data relevant to the boreholes within the report buffer:

Groundwater No	Drillers Log	Distance	Direction
No related drill log data			

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp

Geology 1:100,000

7 Montore Road, Minto, NSW 2566

Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2016

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Geology

7 Montore Road, Minto, NSW 2566

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qal	quartz and lithic "fluvial" sand, silt, and clay						Wollongong & Port Hacking	1:100,000
Rwa	laminite and dark-grey siltstone	Ashfield Shale	Wianamatta Group				Wollongong & Port Hacking	1:100,000

What are the Geological Units within the report buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qal	quartz and lithic "fluvial" sand, silt, and clay						Wollongong & Port Hacking	1:100,000
Rh	medium to coarse-grained quartz sandstone, very minor shale and laminite lenses	Hawkesbury Sandstone					Wollongong & Port Hacking	1:100,000
Rwa	laminite and dark-grey siltstone	Ashfield Shale	Wianamatta Group				Wollongong & Port Hacking	1:100,000
Rwb	shale, carbonaceous claystone, laminite, fine to medium-grained lithic sandstone, rare coal and tuff	Bringelly Shale	Wianamatta Group				Wollongong & Port Hacking	1:100,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

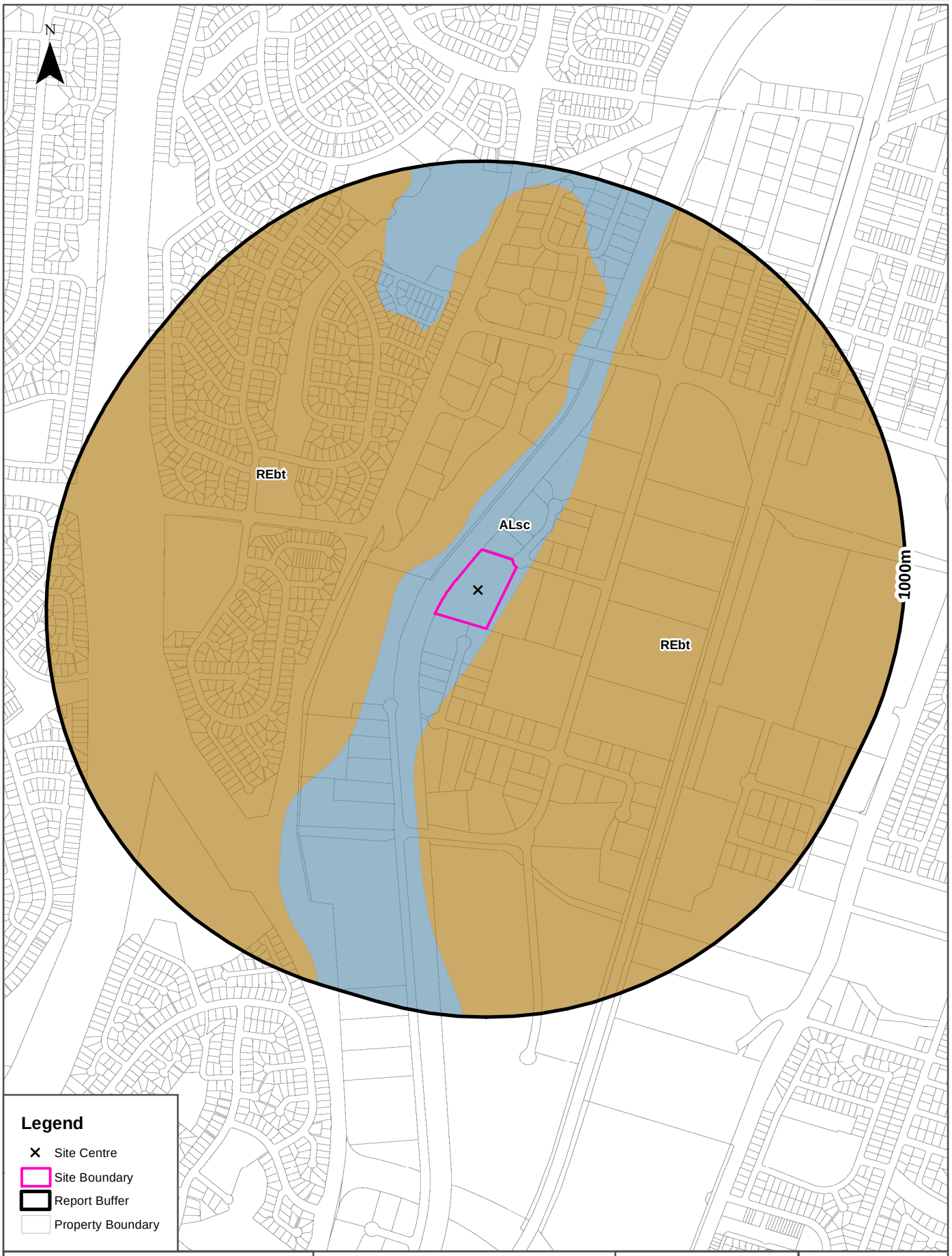
What are the Geological Structures within the report buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

Geological Data Source : NSW Department of Industry, Resources & Energy

Soil Landscapes

7 Montore Road, Minto, NSW 2566



Soils

7 Montore Road, Minto, NSW 2566

Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
ALsc	SOUTH CREEK		ALLUVIAL	Wollongong & Port Hacking	1:100,000

What are the Soil Landscapes within the report buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
ALsc	SOUTH CREEK		ALLUVIAL	Wollongong & Port Hacking	1:100,000
REbt	BLACKTOWN		RESIDUAL	Wollongong & Port Hacking	1:100,000

Acid Sulfate Soils

7 Montore Road, Minto, NSW 2566

Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description
N/A	

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	Distance	Direction
N/A			

Dryland Salinity

7 Montore Road, Minto, NSW 2566

Dryland Salinity

Is there Dryland Salinity data onsite?

No

Is there Dryland Salinity data within the report buffer?

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A	N/A	N/A

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining Subsidence Districts

7 Montore Road, Minto, NSW 2566

Mining Subsidence Districts

Mining Subsidence Districts within the report buffer?

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Environmental Zoning

7 Montore Road, Minto, NSW 2566

State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the report buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	No	N/A

SEPP Protected Areas Data Source: NSW Department of Planning & Environment

State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the report buffer?

Map Id	Feature	Effective Date	Distance	Direction
N/A	No records within buffer			

SEPP Major Development Data Source: NSW Department of Planning & Environment

State Environmental Planning Policy Strategic Land Use Areas

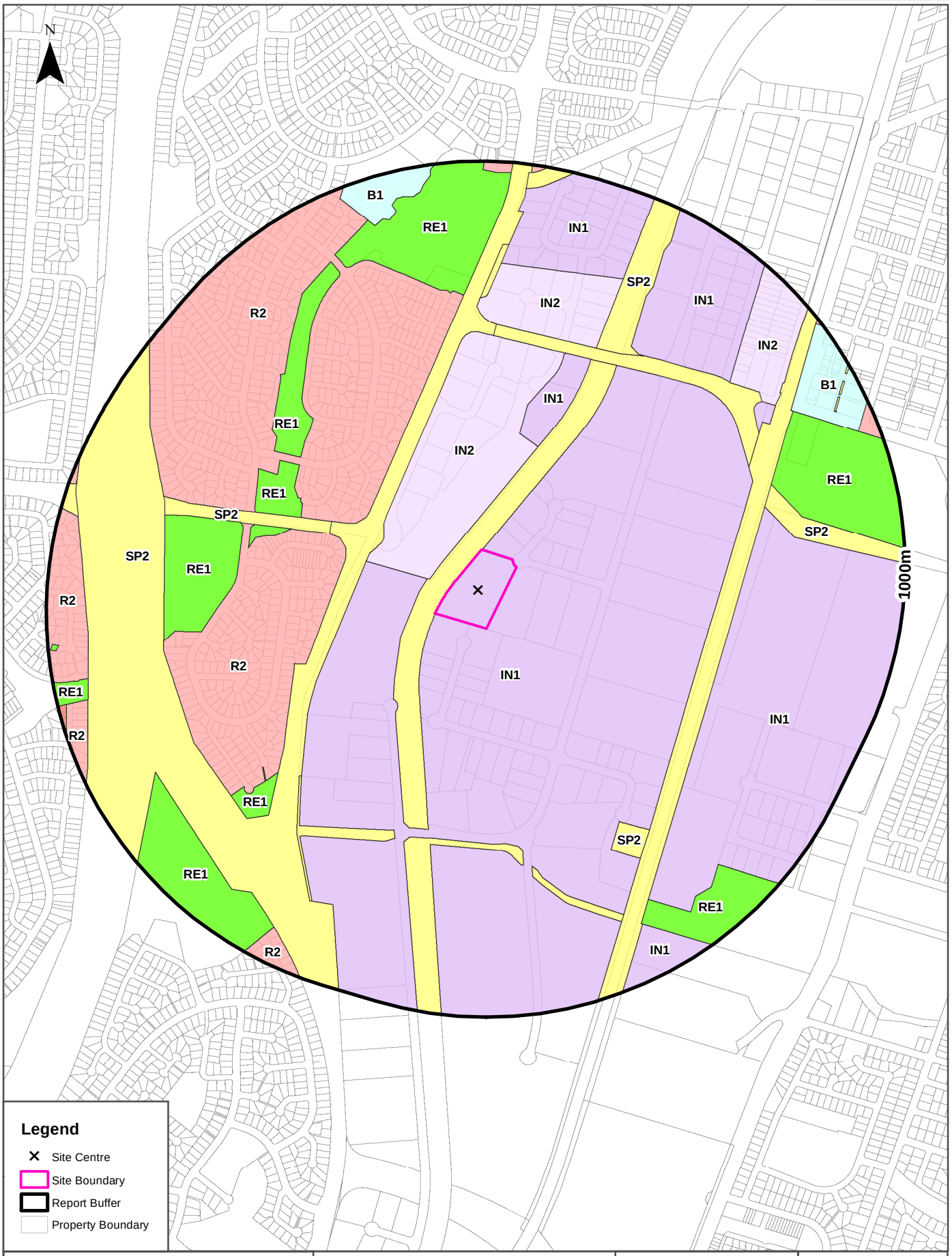
State Environmental Planning Policy Strategic Land Use Areas onsite or within the report buffer?

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment

LEP Planning Zones

7 Montore Road, Minto, NSW 2566



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2016
Planning: NSW Crown Copyright - Planning & Environment

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Local Environmental Plan

7 Montore Road, Minto, NSW 2566

Land Zoning

What Local Environmental Plan Land Zones exist within the report buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		0m	Onsite
SP2	Infrastructure	Drainage	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		0m	North West
IN2	Light Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		57m	North
SP2	Infrastructure	Classified Road	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		212m	North West
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		265m	West
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		283m	North
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		297m	North
SP2	Infrastructure	Road	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		337m	West
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		422m	North West
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		429m	West
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		510m	North West
SP2	Infrastructure	Railway Corridor	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		518m	North East
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		520m	West
SP2	Infrastructure	Drainage	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		542m	South West
SP2	Infrastructure	Road	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		542m	North East
SP2	Infrastructure	Drainage	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		550m	South
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		568m	East
IN2	Light Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		573m	North
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		575m	South West
SP2	Infrastructure	Drainage	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		584m	North East
SP2	Infrastructure	Sub Station	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		601m	South East
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		619m	North East
SP2	Infrastructure	Drainage	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		621m	South
SP2	Infrastructure	Local Road	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		646m	North
SP2	Infrastructure	Road	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		656m	East
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		657m	North
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		688m	East
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		711m	North East
IN2	Light Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		720m	North East
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		738m	North

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B1	Neighbourhood Centre		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		811m	North East
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		811m	South East
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		827m	South West
IN1	General Industrial		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		858m	South
B1	Neighbourhood Centre		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		877m	North
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		894m	West
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		907m	South West
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		908m	West
SP2	Infrastructure	Local Road Widening	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		909m	North East
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		920m	South West
SP2	Infrastructure	Local Road Widening	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		939m	North East
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		945m	North East
SP2	Infrastructure	Road	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		952m	West
RE1	Public Recreation		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		972m	West
R3	Medium Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		977m	West
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		979m	North
SP2	Infrastructure	Local Road Widening	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		979m	North East
R2	Low Density Residential		Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		982m	North West

Local Environmental Plan

7 Montore Road, Minto, NSW 2566

Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
W	4000 m2	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		99.99

Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
M	12.00 m	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		100

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016		100

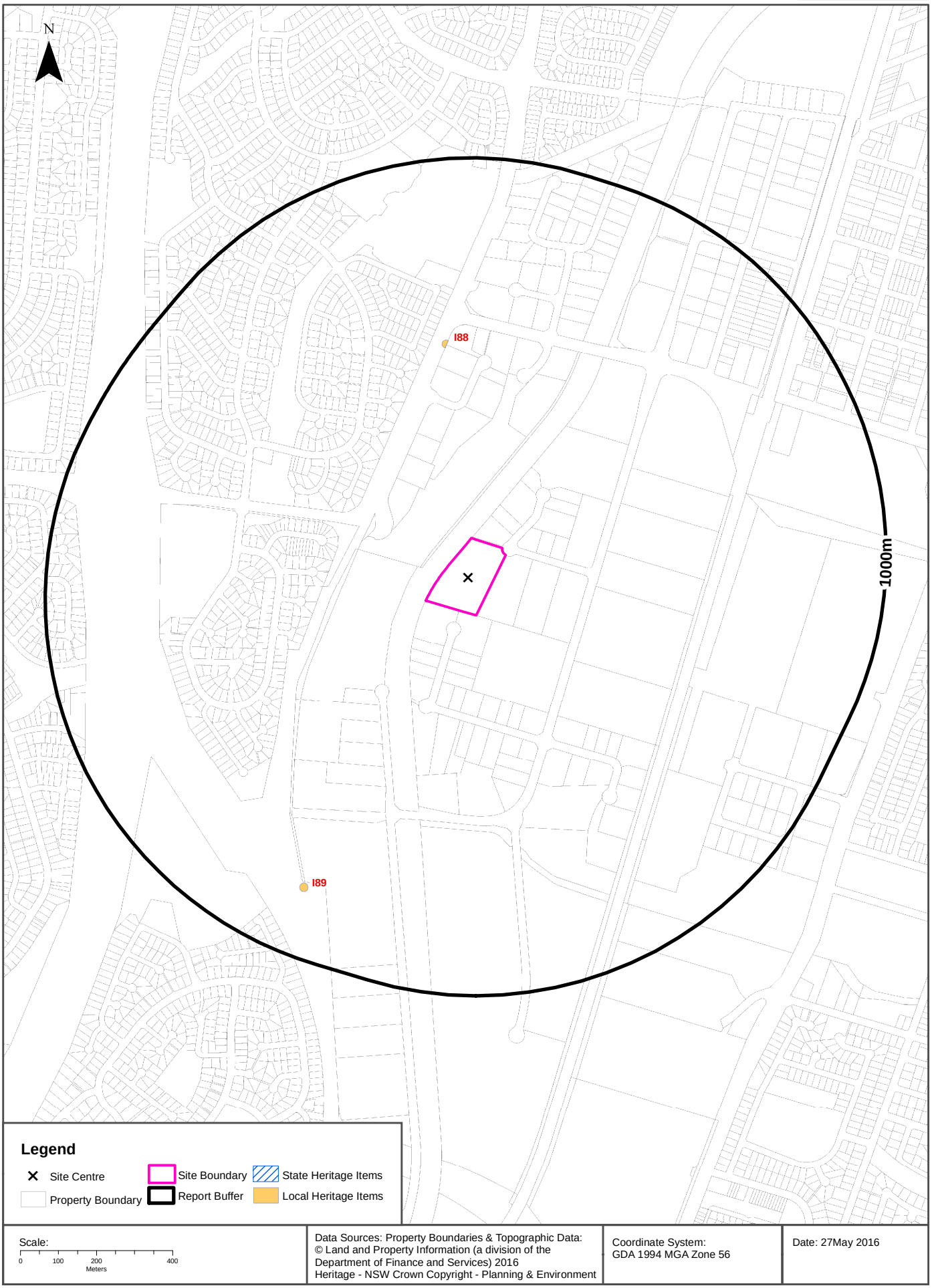
Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
No Data							

Heritage Items

7 Montore Road, Minto, NSW 2566



Heritage

7 Montore Road, Minto, NSW 2566

State Heritage Items

What are the State Heritage Items located within the report buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

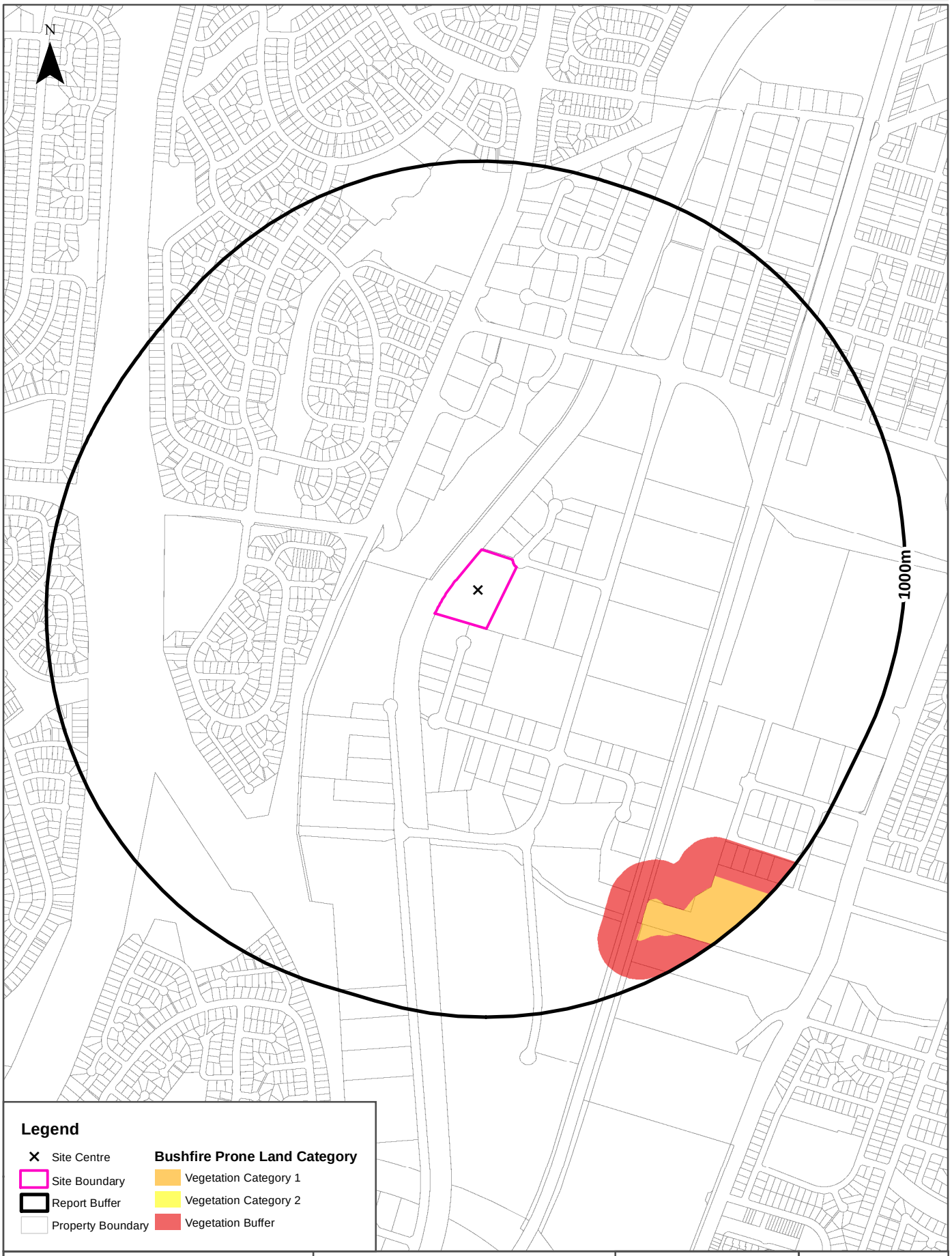
Local Heritage Items

What are the Local Heritage Items located within the report buffer?

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I88	Milestone XXX	Item - General	Local	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016	505m	North
I89	Milestone XXXI	Item - General	Local	Campbelltown Local Environmental Plan 2015	11/12/2015	11/03/2016	11/03/2016	808m	South West

Natural Hazards - Bushfire Prone Land

7 Montore Road, Minto, NSW 2566



Data Sources: Property Boundaries:
© Land and Property Information (a division of the Department of Finance and Services) 2016

Coordinate System:
GDA 1994 MGA Zone 56

Date: 27May 2016

Natural Hazards

7 Montore Road, Minto, NSW 2566

Bushfire Prone Land

What are the nearest Bushfire Prone Land Categories that exist within the report buffer?

Bushfire Prone Land Category	Date Certified	Distance	Direction
Vegetation Buffer	06/06/2014	712m	South East
Vegetation Category 1	06/06/2014	812m	South East

Bushfire Prone Land Data Reference - NSW RFS GIS Data Set

Ecological Constraints - Native Vegetation & RAMSAR Wetlands

7 Montore Road, Minto, NSW 2566

Legend

- Site Centre
- Site Boundary
- Report Buffer
- Property Boundary
- Rainforest
- Wet Sclerophyll Forests
- Dry Sclerophyll Forests
- Forested Wetlands
- Grassy Woodlands
- Heathlands
- Grasslands
- Freshwater Wetlands
- Saline Wetlands
- Artificial Wetlands
- Water
- Other
- RAMSAR Wetlands

Scale: 0 100 200 400 Meters

Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2016

Coordinate System: GDA 1994 MGA Zone 56

Date: 27May 2016

Ecological Constraints

7 Montore Road, Minto, NSW 2566

Native Vegetation

What native vegetation exists within the report buffer?

Map ID	Map Unit Name	Threatened Ecological Community NSW	Threatened Ecological Community EPBC Act	Understorey	Disturbance	Disturbance Index	Dominant Species	Dist	Direction
Weed_Ex	Weed_Ex: Weeds and Exotics			00: Not assessed	00: Not assessed	0: Not assessed	Exotic Species >90%cover	0m	Onsite
Urban_E/N	Urban_E/N: Urban Exotic/Native			00: Not assessed	00: Not assessed	0: Not assessed	Urban Exotic/ Native	132m	North
S_GW03	S_GW03: Cumberland Shale Plains Woodland	Cumberland Plain Woodland	Cumberland Plain Woodland/ Shale Gravel Forest (possible)	15: Grassy natives and exotics	21: Pioneering shrubs	3: High	E.tereticornis/ E.molucanna+/ - E.crebra/ E.eugeinioides	137m	West
S_FoW07	S_FoW07: Cumberland Swamp Oak Riparian Forest	River Flat Eucalypt Forest		20: Weeds and exotics	21: Pioneering shrubs	3: High	C.glauca+/ - Eucalypts	673m	South West
Plant_n	Plant_n: Plantation (native and/or exotic)			00: Not assessed	00: Not assessed	0: Not assessed	Native or Exotic Plantations	693m	South West
S_FoW06	S_FoW06: Cumberland Riverflat Forest	River Flat Eucalypt Forest		15: Grassy natives and exotics	31: Parkland open understorey	4: Very high	E.tereticornis/ E.amplifolia/ A.floribunda	734m	North West

RAMSAR Wetlands

What RAMSAR Wetland areas exist within the report buffer?

Map Id	RAMSAR Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ecological Constraints

7 Montore Road, Minto, NSW 2566

ATLAS of NSW Wildlife

Endangered &Vulnerable Species on the ATLAS of NSW Wildlife database, within 10km of the site?

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Amphibia	Hylidae	Litoria aurea	Green and Golden Bell Frog	No	Endangered, Protected	Vulnerable
Amphibia	Myobatrachidae	Heleioporus australiacus	Giant Burrowing Frog	No	Vulnerable, Protected	Vulnerable
Amphibia	Myobatrachidae	Pseudophryne australis	Red-crowned Toadlet	No	Vulnerable, Protected	
Aves	Accipitridae	Hieraaetus morphnoides	Little Eagle	No	Vulnerable, Protected	
Aves	Accipitridae	Lophoictinia isura	Square-tailed Kite	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Anatidae	Stictonetta naevosa	Freckled Duck	No	Vulnerable, Protected	
Aves	Ardeidae	Botaurus poiciloptilus	Australasian Bittern	No	Endangered, Protected	Endangered
Aves	Burhinidae	Burhinus grallarius	Bush Stone-curlew	No	Endangered, Protected	
Aves	Cacatuidae	Callocephalon fimbriatum	Gang-gang Cockatoo	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Cacatuidae	Calyptorhynchus lathami	Glossy Black-Cockatoo	No	Vulnerable, Protected, Category 2 Sensitive Species	
Aves	Estrildidae	Stagonopleura guttata	Diamond Firetail	No	Vulnerable, Protected	
Aves	Meliphagidae	Anthochaera phrygia	Regent Honeyeater	No	Critically Endangered Species, Protected	Critically Endangered
Aves	Meliphagidae	Epthianura albifrons	White-fronted Chat	No	Vulnerable, Protected	
Aves	Meliphagidae	Epthianura albifrons	White-fronted Chat population in the Sydney Metropolitan Catchment Management Area	No	Endangered Population, Vulnerable, Protected	
Aves	Meliphagidae	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	No	Vulnerable, Protected	
Aves	Neosittidae	Daphoenositta chrysoptera	Varied Sittella	No	Vulnerable, Protected	
Aves	Petroicidae	Petroica boodang	Scarlet Robin	No	Vulnerable, Protected	
Aves	Petroicidae	Petroica phoenicea	Flame Robin	No	Vulnerable, Protected	
Aves	Psittacidae	Glossopsitta pusilla	Little Lorikeet	No	Vulnerable, Protected	
Aves	Psittacidae	Lathamus discolor	Swift Parrot	No	Endangered, Protected, Category 3 Sensitive Species	Endangered
Aves	Psittacidae	Neophema pulchella	Turquoise Parrot	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Strigidae	Ninox connivens	Barking Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Strigidae	Ninox strenua	Powerful Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Gastropoda	Camaenidae	Meridolum corneovirens	Cumberland Plain Land Snail	No	Endangered	
Mammalia	Burramyidae	Cercartetus nanus	Eastern Pygmy-possum	No	Vulnerable, Protected	
Mammalia	Dasyuridae	Dasyurus maculatus	Spotted-tailed Quoll	No	Vulnerable, Protected	Endangered
Mammalia	Emballonuridae	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	No	Vulnerable, Protected	
Mammalia	Molossidae	Mormopterus norfolkensis	Eastern Freetail-bat	No	Vulnerable, Protected	
Mammalia	Petauridae	Petaurus australis	Yellow-bellied Glider	No	Vulnerable, Protected	

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Mammalia	Petauridae	Petaurus norfolcensis	Squirrel Glider	No	Vulnerable, Protected	
Mammalia	Phascolarctidae	Phascolarctos cinereus	Koala	No	Vulnerable, Protected	Vulnerable
Mammalia	Pteropodidae	Pteropus poliocephalus	Grey-headed Flying-fox	No	Vulnerable, Protected	Vulnerable
Mammalia	Vespertilionidae	Chalinolobus dwyeri	Large-eared Pied Bat	No	Vulnerable, Protected	Vulnerable
Mammalia	Vespertilionidae	Falsistrellus tasmaniensis	Eastern False Pipistrelle	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Miniopterus australis	Little Bentwing-bat	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Myotis macropus	Southern Myotis	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Scoteanax rueppellii	Greater Broad-nosed Bat	No	Vulnerable, Protected	
Reptilia	Elapidae	Hoplocephalus bungaroides	Broad-headed Snake	No	Endangered, Protected, Category 2 Sensitive Species	Vulnerable
Reptilia	Varanidae	Varanus rosenbergi	Rosenberg's Goanna	No	Vulnerable, Protected	
Flora	Apocynaceae	Cynanchum elegans	White-flowered Wax Plant	No	Endangered, Protected	Endangered
Flora	Apocynaceae	Marsdenia viridiflora subsp. viridiflora	Marsdenia viridiflora R. Br. subsp. viridiflora population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas	No	Endangered Population	
Flora	Ericaceae	Leucopogon exolasius	Woronora Beard-heath	No	Vulnerable, Protected	Vulnerable
Flora	Ericaceae	Leucopogon fletcheri subsp. fletcheri		No	Endangered, Protected	
Flora	Fabaceae (Faboideae)	Pultenaea pedunculata	Matted Bush-pea	No	Endangered, Protected	
Flora	Fabaceae (Mimosoideae)	Acacia pubescens	Downy Wattle	No	Vulnerable, Protected	Vulnerable
Flora	Gyrostemonaceae	Gyrostemon thesioides		No	Endangered, Protected, Category 3 Sensitive Species	
Flora	Myrtaceae	Callistemon linearifolius	Netted Bottle Brush	No	Vulnerable, Protected, Category 3 Sensitive Species	
Flora	Myrtaceae	Eucalyptus scoparia	Wallangarra White Gum	No	Endangered, Protected	Vulnerable
Flora	Myrtaceae	Melaleuca deanei	Deane's Paperbark	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	Syzygium paniculatum	Magenta Lilly Pilly	No	Endangered, Protected	Vulnerable
Flora	Orchidaceae	Genoplesium baueri	Bauer's Midge Orchid	No	Endangered, Protected, Category 2 Sensitive Species	Endangered
Flora	Orchidaceae	Pterostylis nigricans	Dark Greenhood	No	Vulnerable, Protected, Category 2 Sensitive Species	
Flora	Orchidaceae	Pterostylis saxicola	Sydney Plains Greenhood	No	Endangered, Protected, Category 2 Sensitive Species	Endangered
Flora	Proteaceae	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	No	Vulnerable, Protected	Vulnerable
Flora	Proteaceae	Persoonia hirsuta	Hairy Geebung	No	Endangered, Protected, Category 3 Sensitive Species	Endangered
Flora	Proteaceae	Persoonia nutans	Nodding Geebung	No	Endangered, Protected	Endangered
Flora	Thymelaeaceae	Pimelea spicata	Spiked Rice-flower	No	Endangered, Protected	Endangered

Data does not include records not defined as either endangered or vulnerable, and category 1 sensitive species are also excluded. NSW Office of Environment and Heritage's Atlas of NSW Wildlife, which holds data from a number of custodians. Data obtained 26/05/2016

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Appendix B: Test pit Logs

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **1** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, red brown, with timber, brick fragments, plastic sheet, fine to coarse grained igneous gravel and root fibres.	MC<PL			GRASS COVER
	■							CL-CH	SILTY CLAY: medium to high plasticity, red brown, trace of root fibres.	MC<PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **2** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, red brown, with sandstone gravel, brick fragments, trace of root fibres.	MC<PL			GRASS COVER
								CL-CH	SILTY CLAY: medium to high plasticity, red brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 0.4m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **3** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty sand, fine to coarse grained, grey brown, with brick, concrete, plastic and glass fragments, trace of root fibres.	D			GRASS/WEED COVER
	■		■						FILL: Silty clay, medium to high plasticity, red brown, trace of ash and root fibres.	MC<PL			
	■		■			0.5		CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of root fibres.	MC<PL			
									END OF BOREHOLE AT 0.65m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **4** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Sandy gravel, fine to coarse grained igneous, grey black, trace of ash, brick and concrete fragments.	D			
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown, trace of root fibres.	MC≈PL			
									END OF TEST PIT AT 0.6m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **5** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, red brown, with fine to coarse grained igneous and ironstone gravel, trace of root fibres.	MC<PL			GRASS COVER
								CL-CH	SILTY CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	MC<PL			
									END OF TEST PIT AT 0.4m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **6** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty sand, fine to coarse grained, grey brown, with brick and glass fragments, fine to coarse grained igneous and sandstone gravel, metal, trace of root fibres.	D			GRASS/WEED COVER
	■							CL-CH	SILTY CLAY: medium to high plasticity, dark brown, trace of fine to medium grained ironstone gravel and root fibres.	MC<PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **7** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Sandy gravel, fine to coarse grained igneous, grey black, trace of ash, brick and concrete fragments.	D			
									FILL: Sandy silty clay, medium to high plasticity, yellow brown, trace of brick, ash and root fibres.	MC<PL			SLIGHT HYDROCARBON ODOUR
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 0.7m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **8** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, brown, with fine to medium grained igneous gravel and root fibres.	MC<PL			GRASS/WEED COVER
								CL-CH	SILTY CLAY: medium to high plasticity, brown, with root fibres.	MC<PL			
	■								END OF TEST PIT AT 0.4m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **9** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLET-ION	■		■			0			FILL: Silty clay, medium to high plasticity, brown, with root fibres and brick and concrete fragments.	MC<PL D			GRASS COVER
									FILL: Sand, fine to coarse grained, light grey, with fine to coarse grained sandstone gravel.				
	■					0.5		CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **10** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, brown, with fine to medium grained ironstone gravel, brick and ceramic pipe fragments, root fibres and ash.	MC<PL			GRASS COVER
	■							CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of root fibres.	MC<PL			
						0.5							
									END OF TEST PIT AT 0.6m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **11** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Sandy gravelly clay, medium to high plasticity, black brown, with brick and concrete fragments, trace of root fibres and ash.	MC<PL			GRASS COVER
								CL-CH	SILTY CLAY: medium to high plasticity, dark brown, trace of root fibres.	MC<PL			
						0.5			END OF TEST PIT AT 0.4m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **12** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty sandy clay, medium to high plasticity, dark brown, with igneous gravel, trace of root fibres , brick and plastic fragments.	MC<PL			GRASS/WEED COVER
	■		■						FILL: Silty sand, fine to medium grained, yellow brown, with plastic sheeting, blue metal gravel, shale gravel, trace of root fibers.	D			
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of ironstone gravel and root fibres.	MC<PL			
									END OF BOREHOLE AT 0.7m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **13** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty sand, fine to coarse grained, light brown, with brick, ceramic tile and pipe and concrete fragments, trace of root fibres and ash.	D			GRASS/WEED COVER
										D			
						0.5		CL-CH	FILL: Sand, fine to coarse grained, light grey, with brick and plastic fragments, fine to coarse grained sandstone gravel.	MC<PL			
									SILTY CLAY: medium to high plasticity, grey brown, trace of fine to medium grained ironstone gravel and root fibres.				
						1			END OF BOREHOLE AT 0.7m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **14** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy silty clay, medium to high plasticity, light brown, with brick, plastic and concrete fragments, fine to coarse grained sandstone and igneous gravel, brick fragments, trace of root fibres, ash, slag and porcelain tiles.	MC<PL			GRASS COVER
	■					0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown, trace of fine to medium grained ironstone gravel and root fibres.	MC<PL			
									END OF TEST PIT AT 0.7m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **15** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, red brown, trace of ash and root fibres.	MC<PL			GRASS/WEED COVER
	■		■						FILL: Sand, fine to coarse grained, light grey, with fine to coarse grained sandstone and shale gravel, concrete and glass fragments.	D			
	■					0.5		CL-CH	SILTY CLAY: medium to high plasticity, grey brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 0.8m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **16** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to medium grained, brown/black, with fine to coarse grained igneous gravel, brick and concrete fragments, trace of ash.	D			
	■		■						FILL: Sand, fine to coarse grained, grey brown, with brick, concrete, tile, plastic and blue metal fragments.	D			
						0.5							
	■							CL-CH	SILTY CLAY: medium to high plasticity, grey brown, trace of root fibres.	MC<PL			
						1							
									END OF TEST PIT AT 1.1m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **17** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained, black grey, with fine to coarse grained igneous gravel, brick and concrete fragments.	D			
									FILL: Silty sand, fine to coarse grained, grey brown, with brick, concrete and plastic fragments.				
	■					0.5		CL-CH	SILTY CLAY: medium to high plasticity, grey brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 0.8m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **18** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0		CL	SANDY SILTY CLAY: medium to high plasticity, brown, with root fibres and fine to medium grained igneous gravel.	MC<PL			GRASS/WEED COVER
									END OF TEST PIT AT 0.4m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **19** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, with brick and concrete fragments, trace ash.	M			
	■		■						FILL: Silty sand, fine to coarse grained, light grey, with brick, concrete, ceramic, tile, timber and shale fragments.	D			
						0.5							
	■					1		CL-CH	SILTY CLAY: medium to high plasticity, grey, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 1.3m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **20** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty sandy gravel, fine to coarse grained igneous, dark grey brown, trace of brick and concrete fragments.	D			
	■		■						FILL: Silty sand, fine to coarse grained, light grey, with shale, concrete and brick fragments, trace of root fibres.				
						0.5							
	■					1		CL-CH	SILTY CLAY: medium to high plasticity, grey brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 1.1m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **21** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	1					0			FILL: Sandy gravel, fine to coarse grained igneous, black grey, trace of concrete fragments.	D			
								CL-CH	FILL: Silty gravelly sand, fine to coarse grained, yellow brown, fine to coarse grained igneous gravel.	MC<PL			
						0.5			SILTY CLAY: medium to high plasticity, brown, trace of root fibres.				
									END OF TEST PIT AT 0.4m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **22** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty sand, fine to coarse grained igneous, grey brown, trace of fine to coarse grained sandstone and igneous gravel, ceramic, tile, concrete and asphaltic fragments.	D			GRASS/WEED COVER
								CL-CH		MC<PL			
						0.5			SILTY CLAY: medium to high plasticity, orange brown, trace of root fibres.				
									END OF TEST PIT AT 0.4m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **23** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, black grey, trace of brick and concrete fragments and asphalt.	D			
	■		■			0.5			FILL: Silty gravelly sand, fine to coarse grained, grey brown, with brick, concrete and blue metal fragments.				
									FILL: Silty sand, fine to coarse grained, light grey, with shale fragments, trace of concrete and brick fragments.				
	■					1		CL-CH	SILTY CLAY: medium to high plasticity, light brown, trace of root fibres.	MC≈PL			
									END OF TEST PIT AT 1.3m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **24** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, black grey, with brick, concrete and asphaltic fragments.	D			
									FILL: Silty sand, fine to coarse grained igneous, brown grey, with brick, concrete, blue metal and plastic fragments.				EXCAVATOR REFUSAL
						0.5			END OF TEST PIT AT 0.35m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **25** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained, black grey brown, trace of concrete, brick, metal and asphalt fragments.	D			
									FILL: Sand, fine to coarse grained, yellow grey, with fine to coarse grained sandstone gravel.				
	■		■			0.5			FILL: Silty sand, fine to coarse grained, grey brown, with concrete fragments, trace of metal wire and fine to coarse grained igneous gravel.				
	■							CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of root fibres.	MC<PL			
						1			END OF TEST PIT AT 1.0m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **26** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLET-ION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, grey brown, trace of brick, concrete, metal and asphalt fragments.	D			
									FILL: Silty gravelly sand, fine to coarse grained, yellow grey, fine to coarse grained igneous gravel, with blue metal gravel, trace of brick and concrete fragments.				
	■		■			0.5		CL-CH	SILTY CLAY: medium to high plasticity, dark brown, trace of root fibres.	MC<PL			
									END OF BOREHOLE AT 0.8m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **27** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, black grey, trace of ash.	M			CRUSHED CONCRETE COVER
	■							CL-CH	SILTY CLAY: medium to high plasticity, brown, trace of root fibres.	MC<PL			
									END OF TEST PIT AT 0.4m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **28** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0		CL-CH	SANDY SILTY CLAY: medium to high plasticity, red brown, with shale fragments and root fibres.	MC<PL			WEED/GRASS COVER
									END OF BOREHOLE AT 0.3m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **29** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, brown, with brick, concrete and blue metal fragments.	D			
									END OF TEST PIT AT 0.2m				EXCAVATOR REFUSAL
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **30** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, black brown, asphalt, trace of brick, concrete and plastic fragments and ash.	D			
	■							CL-CH	FILL: Sandy gravel, fine to coarse grained igneous, brown, trace of metal, brick and concrete fragments.	MC<PL			
	■					0.5			SILTY CLAY: medium to high plasticity, red brown mottled orange, trace of root fibres.				
									END OF TEST PIT AT 0.6m				EXCAVATOR REFUSAL
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **31** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Sandy gravel, fine to coarse grained igneous, dark brown, trace of brick and concrete fragments and ash.	D			
									END OF TEST PIT AT 0.2m				EXCAVATOR REFUSAL
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **32** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 1-6-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0		CL-CH	SANDY SILTY CLAY: medium to high plasticity, red brown, with fine to coarse grained igneous gravel and root fibres.	MC<PL			GRASS/WEED COVER
									END OF TEST PIT AT 0.4m				
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Test Pit No. **33** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: CONCRETE RECYCLERS

Project: FORMER COMPOUND & CONTAINER STORAGE

Location: 7 MONTORE ROAD, MINTO, NSW

Job No. E29448K **Method:** 5 TONNE EXCAVATOR **R.L. Surface:** N/A

Date: 31-5-16 **Datum:**

Logged/Checked by: K.T./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ABS	SAMPLES SAL	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■			0			FILL: Silty clay, medium to high plasticity, red brown, with brick fragments and root fibres.	MC<PL			
	■							CL-CH	SILTY CLAY: medium to high plasticity, red brow, trace of root fibres.	MC<PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

EXPLANATORY NOTES – ENVIRONMENTAL LOGS

INTRODUCTION

These notes have been provided to supplement the environmental report with regards to drilling and field logging. Not all notes are necessarily relevant to all reports. Where geotechnical borehole logs are utilised for environmental purpose, reference should also be made to the explanatory notes included in the geotechnical report. Environmental logs are not suitable for geotechnical purposes.

The ground is a product of continuing natural and manmade processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Environmental studies involve gathering and assimilating limited facts about these characteristics and properties in order to understand the ground on a particular site under certain conditions. These conditions are directly relevant only to the ground at the place where, and time when, the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726, the SAA Site Investigation Code. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geotechnical practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached Unified Soil Classification Table qualified by the grading of other particles present (e.g. sandy clay) as set out below (note that unless stated in the report, the soil classification is based on a qualitative field assessment, not laboratory testing):

Soil Classification	Particle Size
Clay	less than 0.002mm
Silt	0.002 to 0.075mm
Sand	0.075 to 2mm
Gravel	2 to 60mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose	less than 4
Loose	4 – 10
Medium dense	10 – 30
Dense	30 – 50
Very Dense	greater than 50

Cohesive soils are classified on the basis of strength (consistency) either by use of hand penetrometer, laboratory testing or engineering examination. The strength terms are defined as shown in the following table:

Classification	Unconfined Compressive Strength kPa
Very Soft	less than 25
Soft	25 – 50
Firm	50 – 100
Stiff	100 – 200
Very Stiff	200 – 400
Hard	Greater than 400
Friable	Strength not attainable – soil crumbles

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'Shale' is used to describe thinly bedded to laminated siltstone.

DRILLING OR EXCAVATION METHODS

The following is a brief summary of drilling and excavation methods currently adopted by the Company, and some comments on their use and application. All except test pits and hand auger drilling require the use of a mechanical drilling rig.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the in-situ soils if it is safe to descend into the pit. The depth of penetration is limited to approximately 3m for a backhoe and up to 6m for an excavator. Limitations of test pits include problems associated with disturbance and difficulty of reinstatement; and the consequent effects on nearby structures. Care must be taken if construction is to be carried out near test pit locations to either properly re-compact the backfill during construction, or to design and construct the structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Premature refusal of the hand augers can occur on a variety of materials such as fill, hard clay, gravel or ironstone, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and in-situ testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively lower reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

Rock Augering: Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock fragments. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term 'mud' encompasses a range of products ranging from bentonite to polymers such as Revert or Biogel. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (e.g. from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, an NMLC triple tube core barrel, which gives a core of about 50mm diameter, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as CORE LOSS. The locations of losses are determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the top end of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, "Methods of Testing Soils for Engineering Purposes" – Test F3.1.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

- In the case where full penetration is obtained with successive blow counts for each 150mm of, say, 4, 6 and 7 blows, as: N = 13 (4, 6, 7)
- In a case where the test is discontinued short of full penetration, say after 15 blows for the first 150mm and 30 blows for the next 40mm, as: N>30 (15, 30/40mm)

The results of the test can be related empirically to the engineering properties of the soil. Occasionally, the drop hammer is used to drive 50mm diameter thin walled sample tubes (U50) in clays. In such circumstances, the test results are shown on the borehole logs in brackets.

A modification to the SPT test is where the same driving system is used with a solid 60 tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as "Nc" on the borehole logs, together with the number of blows per 150mm penetration.

LOGS

The borehole or test pit logs presented herein are an interpretation of the subsurface conditions, and their reliability will depend to some extent on the frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will enable the most reliable assessment, but is not always practicable or possible to justify on economic grounds. In any case, the boreholes or test pits represent only a very small sample of the total subsurface conditions.

The attached explanatory notes define the terms and symbols used in preparation of the logs.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than "straight line"

variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

Where groundwater levels are measured in boreholes, there are several potential problems:

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it is left open;
- A localised perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes and may not be the same at the time of construction; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must be washed out of the hole or 'reverted' chemically if water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after stabilising at intervals ranging from several days to perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (e.g. bricks, concrete, plastic, slag/ash, steel etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably determine the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density, strength and material type is much greater than with natural soil deposits. If the volume and quality of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes

LABORATORY TESTING

Laboratory testing has not been undertaken to confirm the soil classifications and rocks strengths indicated on the environmental logs unless noted in the report.

SITE ANOMALIES

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, EIS should be notified immediately.

GRAPHIC LOG SYMBOLS FOR SOIL AND ROCKS

SOIL


FILL


TOPSOIL


CLAY (CL, CH)


SILT (ML, MH)


SAND (SP, SW)


GRAVEL (GP, GW)


SANDY CLAY (CL, CH)


SILTY CLAY (CL, CH)


CLAYEY SAND (SC)


SILTY SAND (SM)


GRAVELLY CLAY (CL, CH)


CLAYEY GRAVEL (GC)


SANDY SILT (ML)


PEAT AND ORGANIC SOILS

ROCK


CONGLOMERATE


SANDSTONE


SHALE


SILTSTONE, MUDSTONE, CLAYSTONE


LIMESTONE


PHYLLITE, SCHIST


TUFF


GRANITE, GABBRO


DOLERITE, DIORITE


BASALT, ANDESITE


QUARTZITE

DEFECTS AND INCLUSIONS


CLAY SEAM


SHEARED OR CRUSHED SEAM


BRECCIATED OR SHATTERED SEAM/ZONE


IRONSTONE GRAVEL


ORGANIC MATERIAL

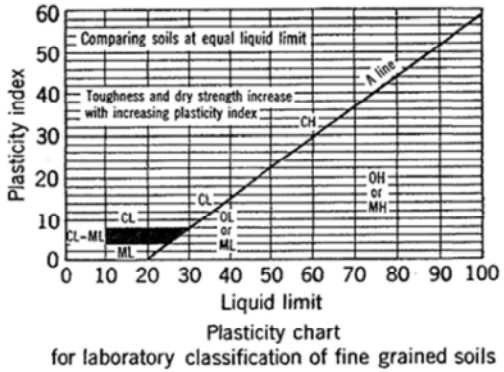
OTHER MATERIALS


CONCRETE


BITUMINOUS CONCRETE, COAL


COLLUVIUM

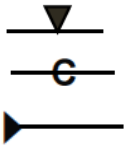
Field Identification Procedures (Excluding particles larger than 75 μm and basing fractions on estimated weights)						Group Symbols [a]	Typical Names	Information Required for Describing Soils	Laboratory Classification Criteria
Coarse-grained soils More than half of material is *larger* than 75 μm sieve size[b] (The 75 μm sieve size is about the smallest particle visible to naked eye)	Gravels More than half of coarse fraction is larger than 4 mm sieve size	Clean gravels (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes			*GW*	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics Example: *Silty sand*, gravelly; about 20% hard, angular gravel particles 12 mm maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fines with low dry strength; well compacted and moist in place; alluvial sand; (*SM*)	Use grain size curve in identifying the fractions as given under field identification Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than 75 μm sieve size) coarse grained soils are classified as follows: Less than 5% *GW, GP, SW, SP* More than 12% *GM, GC, SM, SC* 5% to 12% *Borderline* cases requiring use of dual symbols $C_U = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *GW* Atterberg limits below "A" line, or *PI* less than 4 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits above "A" line, with *PI* greater than 7
			Predominantly one size or a range of sizes with some intermediate sizes missing			*GP*	Poorly graded gravels, gravel-sand mixtures, little or no fines		
		Gravels with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures see *ML* below)			*GM*	Silty gravels, poorly graded gravel-sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)			*GC*	Clayey gravels, poorly graded gravel-sand-clay mixtures		
	Sands More than half of coarse fraction is smaller than 4 mm sieve size	Clean sands (little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate particle sizes			*SW*	Well graded sands, gravelly sands, little or no fines		$C_U = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *SW* Atterberg limits below "A" line or *PI* less than 5 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits below "A" line with *PI* greater than 7
			Predominantly one size or a range of sizes with some intermediate sizes missing			*SP*	Poorly graded sands, gravelly sands, little or no fines		
		Sands with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures, see *ML* below)			*SM*	Silty sands, poorly graded sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)			*SC*	Clayey sands, poorly graded sand-clay mixtures		
Fine-grained soils More than half of material is *smaller* than 75 μm sieve size	Identification Procedures on Fraction Smaller than 380 μm Sieve Size		Dry Strength (crushing characteristics)	Dilatancy (reaction to shaking)	Toughness (consistency near plastic limit)				
	Silts and clays liquid limit less than 50		None to slight	Quick to slow	None	*ML*	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity	Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions Example: *Clayey silt*, brown; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (*ML*)	
			Medium to high	None to very slow	Medium	*CL*	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			Slight to medium	Slow	Slight	*OL*	Organic silts and organic silt-clays of low plasticity		
	Silts and clays liquid limit greater than 50		Slight to medium	Slow to none	Slight to medium	*MH*	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			High to very high	None	High	*CH*	Inorganic clays of high plasticity, fat clays		
			Medium to high	None to very slow	Slight to medium	*OH*	Organic clays of medium to high plasticity		
Highly Organic Soils			Readily identified by colour, odour, spongy feel and frequently by fibrous texture			*Pt*	Peat and other highly organic soils		



Plasticity chart
for laboratory classification of fine grained soils

Note: 1 Soils possessing characteristics of two groups are designated by combinations of group symbols (eg. GW-GC, well graded gravel-sand mixture with clay fines).
2 Soils with liquid limits of the order of 35 to 50 may be visually classified as being of medium plasticity.

LOG SYMBOLS

LOG COLUMN	SYMBOL	DEFINITION
Groundwater Record		Standing water level. Time delay following completion of drilling may be shown. Extent of borehole collapse shortly after drilling. Groundwater seepage into borehole or excavation noted during drilling or excavation.
Samples	ES U50 DB DS ASB ASS SAL	Soil sample taken over depth indicated, for environmental analysis. Undisturbed 50mm diameter tube sample taken over depth indicated. Bulk disturbed sample taken over depth indicated. Small disturbed bag sample taken over depth indicated. Soil sample taken over depth indicated, for asbestos screening. Soil sample taken over depth indicated, for acid sulfate soil analysis. Soil sample taken over depth indicated, for salinity analysis.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual show blows per 150mm penetration. 'R' as noted below.
	N_c = 5 7 3 R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60 degree solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25 PID = 100	Vane shear reading in kPa of Undrained Shear Strength. Photoionisation detector reading in ppm (Soil sample heads pace test).
Moisture (Cohesive Soils) (Cohesionless)	MC > PL MC ≈ PL MC < PL D M W	Moisture content estimated to be greater than plastic limit. Moisture content estimated to be approximately equal to plastic limit. Moisture content estimated to be less than plastic limit. DRY – Runs freely through fingers. MOIST – Does not run freely but no free water visible on soil surface. WET – Free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS S F St VSt H ( )	VERY SOFT – Unconfined compressive strength less than 25kPa SOFT – Unconfined compressive strength 25-5 0kPa FIRM – Unconfined compressive strength 50-1 00kPa STIFF – Unconfined compressive strength 100- 200kPa VERY STIFF – Unconfined compressive strength 200- 400kPa HARD – Unconfined compressive strength greater than 400kPa Bracketed symbol indicates estimated consistency based o n tactile examination or other tests.
Density Index/ Relative Density (Cohesionless Soils)	VL L MD D VD ( )	**Density Index (ID) Range (%)** / **SPT ' N' Value Range (Blows/300mm)** Very Loose <15 / 0-4 Loose 15-35 / 4-10 Medium Dense 35-65 / 10-30 Dense 65-85 / 30-50 Very Dense >85 / >50 Bracketed symbol indicates estimated density based on ease of drilling or other tests.
Hand Penetrometer Readings	300 250	Numbers indicate individual test results in kPa on representative undisturbed material unless noted otherwise
Remarks	'V' bit 'TC' bit T_{60}	Hardened steel 'V' shaped bit. Tungsten carbide wing bit. Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.

LOG SYMBOLS CONTINUED

ROCK STRENGTH

Rock strength is defined by the Point Load Strength Index (Is 50) and refers to the strength of the rock substance in the bedding. The test procedure is described by the International Journal of Rock Mechanics, Mining and Geomechanics Abstract Volume 22, No 2, 1985.

TERM	SYMBOL	Is (50) MPa	FIELD GUIDE
Extremely Low:	EL	0.03	Easily remoulded by hand to a material with soil properties.
Very Low:	VL	0.1	May be crumbled in the hand. Sandstone is "sugary" and friable.
Low:	L	0.3	A piece of core 150 mm long x 50mm dia. may be broken by hand and easily scored with a knife. Sharp edges of core may be friable and break during handling.
Medium Strength:	M	1	A piece of core 150 mm long x 50mm dia. can be broken by hand with difficulty. Readily scored with knife.
High:	H	3	A piece of core 150 mm long x 50mm dia. core cannot be broken by hand, can be slightly scratched or scored with knife; rock rings under hammer.
Very High:	VH	10	A piece of core 150 mm long x 50mm dia. may be broken with hand-held pick after more than one blow. Cannot be scratched with pen knife; rock rings under hammer.
Extremely High:	EH		A piece of core 150 mm long x 50mm dia. is very difficult to break with h and-held hammer . Rings when struck with a hammer.

ROCK STRENGTH

ABBREVIATION	DESCRIPTION	NOTES
Be	Bedding Plane Parting	Defect orientations measured relative to the normal to (i.e. relative to horizontal for vertical holes)
CS	Clay Seam	
J	Joint	
P	Planar	
Un	Undulating	
S	Smooth	
R	Rough	
IS	Iron stained	
XWS	Extremely Weathered Seam	
Cr	Crushed Seam	
60t	Thickness of defect in millimetres	

Appendix C: Laboratory Reports & COC Documents

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Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 147823

Client:

Environmental Investigation Services
PO Box 976
North Ryde BC
NSW 1670

Attention: K Taylor

Sample log in details:

Your Reference:	**E29448K, Minto**
No. of samples:	5 Materials, 91 Soils
Date samples received / completed instructions received	02/06/16 / 02/16/16

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	9/06/16 / 8/06/16
Date of Preliminary Report:	Not Issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	---------- -	NS1	NS2	NS3	NS4	CS1
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	101	95	99	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	---------- -	CS2	CS3	CS4	CS5	CS6
Depth	----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	94	95	99	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-16	147823-17	147823-20	147823-23	147823-25
Your Reference	----------	TB1	TS1	TP2	TP3	TP4
Depth	- ----------	-	-	0.0-0.1	0.25-0.45	0.0-0.25
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	[NA]	[NA]	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	[NA]	[NA]	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	[NA]	[NA]	<25	<25	<25
Benzene	mg/kg	<0.2	96%	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	96%	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	97%	<1	<1	<1
m+p-xylene	mg/kg	<2	98%	<2	<2	<2
o-Xylene	mg/kg	<1	98%	<1	<1	<1
naphthalene	mg/kg	[NA]	[NA]	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	96	93	95	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-27	147823-31	147823-34	147823-37	147823-39
Your Reference	----------	TP5	TP7	TP8	TP9	TP10
Depth	- ----------	0.0-0.1	0.0-0.1	0.0-0.1	0.15-0.35	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	98	102	98	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-41	147823-43	147823-46	147823-49	147823-51
Your Reference	---------- -	TP11	TP12	TP13	TP14	TP15
Depth	----------	0.0-0.1	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	101	96	99	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-54	147823-58	147823-60	147823-62	147823-67
Your Reference	---------- -	TP16	TP17	TP18	TP19	TP21
Depth	----------	0.0-0.2	0.2-0.4	0.0-0.2	0.1-0.3	0.0-0.1
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	96	95	88	105

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-70	147823-72	147823-75	147823-79	147823-82
Your Reference	---------- -	TP22	TP23	TP24	TP25	TP26
Depth	----------	0.0-0.2	0.1-0.25	0.0-0.05	0.4-0.6	0.2-0.4
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	87	97	101	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	147823-84	147823-86	147823-87	147823-91	147823-92
Your Reference	---------- -	TP27	TP28	TP29	TP31	TP32
Depth	----------	0.0-0.15	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	104	104	103	98

vTRH(C6-C10)/BTEXN in Soil				
Our Reference:	UNITS	147823-93	147823-95	147823-96
Your Reference	---------- -	TP33	DUPKT1	DUPKT3
Depth	----------	0.0-0.2	-	-
Date Sampled		31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	108	102	99

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	---------- -	NS1	NS2	NS3	NS4	CS1
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	05/06/2016	05/06/2016	06/06/2016	05/06/2016	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	97	86	81	89	86

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	---------- -	CS2	CS3	CS4	CS5	CS6
Depth	----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	05/06/2016	05/06/2016	05/06/2016	05/06/2016	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	82	86	84	83

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-20	147823-23	147823-25	147823-27	147823-31
Your Reference	---------- -	TP2	TP3	TP4	TP5	TP7
Depth	----------	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	05/06/2016	05/06/2016	06/06/2016	06/06/2016	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	530	<100	350
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	1,100	<100	1,000
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	1,300	<100	1,000
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	1,200	<100	1,200
Surrogate o-Terphenyl	%	86	89	99	77	100

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-34	147823-37	147823-39	147823-41	147823-43
Your Reference	---------- -	TP8	TP9	TP10	TP11	TP12
Depth	----------	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	05/06/2016	05/06/2016	05/06/2016	05/06/2016	06/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	250	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	520	<100	<100	810	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	500	<100	<100	780	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	400	<100	<100	1,000	<100
Surrogate o-Terphenyl	%	93	86	83	94	80

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-46	147823-49	147823-51	147823-54	147823-58
Your Reference	---------- -	TP13	TP14	TP15	TP16	TP17
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	220	280
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	200	170
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	300	480
Surrogate o-Terphenyl	%	80	81	80	78	85

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-60	147823-62	147823-67	147823-70	147823-72
Your Reference	---------- -	TP18	TP19	TP21	TP22	TP23
Depth	----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	05/06/2016	06/06/2016	06/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	560	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	1,500	110	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	1,600	110	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	1,700	<100	<100
Surrogate o-Terphenyl	%	82	82	99	81	78

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-75	147823-79	147823-82	147823-84	147823-86
Your Reference	---------- -	TP24	TP25	TP26	TP27	TP28
Depth	----------	0.0-0.05	0.4-0.6	0.2-0.4	0.0-0.15	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	05/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	160	<100	<100	410	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	450	<100	<100	1,000	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	420	<100	<100	1,100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	680	<100	<100	1,200	<100
Surrogate o-Terphenyl	%	94	76	77	92	77

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	147823-87	147823-91	147823-92	147823-93	147823-95
Your Reference	---------- -	TP29	TP31	TP32	TP33	DUPKT1
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	-
Date Sampled		1/06/2016	1/06/2016	1/06/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	05/06/2016	06/06/2016	06/06/2016	06/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	170	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	410	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	52	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	52	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	450	100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	620	<100	<100	<100
Surrogate o-Terphenyl	%	77	97	80	79	75

svTRH (C10-C40) in Soil		
Our Reference:	UNITS	147823-96
Your Reference	----------	DUPKT3
	-	
Depth	----------	-
Date Sampled		31/05/2016
Type of sample		Soil
Date extracted	-	03/06/2016
Date analysed	-	06/06/2016
$TRHC_{10}$ - C_{14}	mg/kg	<50
$TRHC_{15}$ - C_{28}	mg/kg	<100
$TRHC_{29}$ - C_{36}	mg/kg	<100
$TRH>C_{10}$-C_{16}	mg/kg	<50
$TRH>C_{10}$ - C_{16} less Naphthalene (F2)	mg/kg	<50
$TRH>C_{16}$-C_{34}	mg/kg	<100
$TRH>C_{34}$-C_{40}	mg/kg	<100
Surrogate o-Terphenyl	%	75

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-1 NS1	147823-3 NS2	147823-5 NS3	147823-6 NS4	147823-7 CS1
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	<0.1	<0.1	0.1
Pyrene	mg/kg	<0.1	0.3	<0.1	0.1	0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.08	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	0.78	NIL (+)VE	0.23	0.25
Surrogate p-Terphenyl-d14	%	97	119	108	104	108

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-9 CS2	147823-11 CS3	147823-12 CS4	147823-13 CS5	147823-14 CS6
Depth	-	1	1	1.2	1	1
Date Sampled	----------	31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	100	99	130	115	110

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-20 TP2	147823-23 TP3	147823-25 TP4	147823-27 TP5	147823-31 TP7
Depth	-	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled	----------	31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.3	<0.1	0.4
Acenaphthene	mg/kg	<0.1	<0.1	0.5	<0.1	0.2
Fluorene	mg/kg	<0.1	<0.1	0.6	<0.1	0.2
Phenanthrene	mg/kg	<0.1	<0.1	6.1	<0.1	2.8
Anthracene	mg/kg	<0.1	<0.1	2.2	<0.1	1
Fluoranthene	mg/kg	<0.1	<0.1	11	<0.1	6.5
Pyrene	mg/kg	<0.1	<0.1	11	<0.1	6.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	4.8	<0.1	3.1
Chrysene	mg/kg	<0.1	<0.1	3.3	<0.1	2.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	8.3	<0.2	6.5
Benzo(a)pyrene	mg/kg	<0.05	<0.05	5.2	<0.05	3.9
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	2.3	<0.1	1.7
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.5	<0.1	0.3
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	2.0	<0.1	1.4
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	7.3	<0.5	5.3
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	7.3	<0.5	5.3
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	7.3	<0.5	5.3
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	58	NIL (+)VE	37
Surrogate p-Terphenyl-d14	%	100	96	104	90	101

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-34 TP8	147823-37 TP9	147823-39 TP10	147823-41 TP11	147823-43 TP12
Depth	----------	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	1.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.6	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	2.8	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	2.7	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	1.6	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	1.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	3.0	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	1.7	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.7	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.6	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	2.4	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	2.4	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	2.4	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	16	NIL (+)VE
Surrogate p-Terphenyl-d14	%	100	117	92	110	110

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-46 TP13	147823-49 TP14	147823-51 TP15	147823-54 TP16	147823-58 TP17
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.2	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	0.6	0.2
Pyrene	mg/kg	0.1	<0.1	<0.1	0.8	0.3
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.3	0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.5	0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.3	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	0.10	NIL (+)VE	NIL (+)VE	3.0	1.2
Surrogate p-Terphenyl-d14	%	101	93	97	93	100

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-60 TP18	147823-62 TP19	147823-67 TP21	147823-70 TP22	147823-72 TP23
Depth	----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	1.2	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	2.1	<0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	0.8	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.1	6.7	<0.1	0.4
Pyrene	mg/kg	<0.1	0.1	6.3	<0.1	0.5
Benzo(a)anthracene	mg/kg	<0.1	<0.1	4.5	0.1	0.2
Chrysene	mg/kg	<0.1	<0.1	3.1	<0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	7.2	<0.2	0.3
Benzo(a)pyrene	mg/kg	<0.05	<0.05	4.4	<0.05	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	3.8	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.8	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	3.2	<0.1	0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	6.9	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	6.9	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	6.9	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	0.21	45	0.10	2.0
Surrogate p-Terphenyl-d14	%	105	103	96	99	101

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-75 TP24	147823-79 TP25	147823-82 TP26	147823-84 TP27	147823-86 TP28
Depth	----------	0.0-0.05	0.4-0.6	0.2-0.4	0.0-0.15	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	1.3	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Phenanthrene	mg/kg	0.6	0.5	<0.1	4.8	<0.1
Anthracene	mg/kg	0.2	0.2	<0.1	1.3	<0.1
Fluoranthene	mg/kg	1.8	1.1	0.2	10	<0.1
Pyrene	mg/kg	2.6	1.2	0.2	9.6	<0.1
Benzo(a)anthracene	mg/kg	1.1	0.5	<0.1	5.5	<0.1
Chrysene	mg/kg	1.1	0.4	<0.1	3.8	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	2.1	0.6	<0.2	7.6	<0.2
Benzo(a)pyrene	mg/kg	0.83	0.3	0.06	4.5	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	1.2	0.2	<0.1	4.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.8	<0.1
Benzo(g,h,i)perylene	mg/kg	1.1	0.2	<0.1	3.3	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.3	<0.5	<0.5	7.2	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.3	0.5	<0.5	7.2	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.4	0.6	<0.5	7.2	<0.5
Total Positive PAHs	mg/kg	13	5.3	0.49	58	NIL (+)VE
Surrogate p-Terphenyl-d14	%	104	101	100	107	128

PAHs in Soil Our Reference: Your Reference	UNITS ----------	147823-87 TP29	147823-91 TP31	147823-92 TP32	147823-93 TP33	147823-95 DUPKT1
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	-
Date Sampled		1/06/2016	1/06/2016	1/06/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	1.2	1.6	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.3	0.5	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	3.1	3.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	3.1	3.2	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	1.3	1.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.9	1.3	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	2	2.7	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.86	1.8	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.8	1.3	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.8	1.7	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.2	2.7	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.3	2.7	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.3	2.7	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	14	19	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	129	75	100	103	123

PAHs in Soil		
Our Reference:	UNITS	147823-96
Your Reference	----------	DUPKT3
	-	
Depth	----------	-
Date Sampled		31/05/2016
Type of sample		Soil
Date extracted	-	03/06/2016
Date analysed	-	03/06/2016
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE
Surrogate p-Terphenyl-d14	%	107

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	----------	NS1	NS2	NS3	NS4	CS1
	-					
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	73	71	73	75	72

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	----------	CS2	CS3	CS4	CS5	CS6
Depth	- ----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	73	71	72	72	73

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-20	147823-23	147823-25	147823-27	147823-31
Your Reference	----------	TP2	TP3	TP4	TP5	TP7
Depth	- ----------	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	06/06/2016	03/06/2016	06/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	69	71	67	70	74

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-34	147823-37	147823-39	147823-41	147823-43
Your Reference	----------	TP8	TP9	TP10	TP11	TP12
Depth	- ----------	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	77	69	70	71	70

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-46	147823-49	147823-51	147823-54	147823-58
Your Reference	----------	TP13	TP14	TP15	TP16	TP17
Depth	- ----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	70	70	69	72	75

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-60	147823-62	147823-67	147823-70	147823-72
Your Reference	---------- -	TP18	TP19	TP21	TP22	TP23
Depth	----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	71	70	67	71	68

Organochlorine Pesticides in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	147823-75 TP24 0.0-0.05 1/06/2016 Soil	147823-79 TP25 0.4-0.6 1/06/2016 Soil	147823-82 TP26 0.2-0.4 1/06/2016 Soil	147823-84 TP27 0.0-0.15 1/06/2016 Soil	147823-86 TP28 0.0-0.2 1/06/2016 Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	66	67	68	65	67

Organochlorine Pesticides in soil						
Our Reference:	UNITS	147823-87	147823-91	147823-92	147823-93	147823-95
Your Reference	----------	TP29	TP31	TP32	TP33	DUPKT1
	-					
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	-
Date Sampled		1/06/2016	1/06/2016	1/06/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	65	63	62	70	69

Organochlorine Pesticides in soil		
Our Reference:	UNITS	147823-96
Your Reference	----------	DUPKT3
	-	
Depth	----------	-
Date Sampled		31/05/2016
Type of sample		Soil
Date extracted	-	03/06/2016
Date analysed	-	06/06/2016
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	67

PCBs in Soil						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	----------	NS1	NS2	NS3	NS4	CS1
Depth	- ----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	73	71	73	75	72

PCBs in Soil						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	----------	CS2	CS3	CS4	CS5	CS6
Depth	- ----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	73	71	72	72	73

PCBs in Soil Our Reference: Your Reference	UNITS ----------	147823-20 TP2	147823-23 TP3	147823-25 TP4	147823-27 TP5	147823-31 TP7
Depth	-	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled	----------	31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	06/06/2016	03/06/2016	06/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	69	71	67	70	74

PCBs in Soil Our Reference: Your Reference	UNITS ----------	147823-34 TP8	147823-37 TP9	147823-39 TP10	147823-41 TP11	147823-43 TP12
Depth	-	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled	----------	31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	77	69	70	71	70

PCBs in Soil						
Our Reference:	UNITS	147823-46	147823-49	147823-51	147823-54	147823-58
Your Reference	----------	TP13	TP14	TP15	TP16	TP17
Depth	- ----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	70	70	69	72	75

PCBs in Soil						
Our Reference:	UNITS	147823-60	147823-62	147823-67	147823-70	147823-72
Your Reference	----------	TP18	TP19	TP21	TP22	TP23
Depth	- ----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	71	70	67	71	68

PCBs in Soil Our Reference: Your Reference	UNITS ----------	147823-75 TP24	147823-79 TP25	147823-82 TP26	147823-84 TP27	147823-86 TP28
Depth	-	0.0-0.05	0.4-0.6	0.2-0.4	0.0-0.15	0.0-0.2
Date Sampled	----------	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	66	67	68	65	67

PCBs in Soil Our Reference: Your Reference	UNITS ----------	147823-87 TP29	147823-91 TP31	147823-92 TP32	147823-93 TP33	147823-95 DUPKT1
Depth	-	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	-
Date Sampled	----------	1/06/2016	1/06/2016	1/06/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	65	63	62	70	69

PCBs in Soil		
Our Reference:	UNITS	147823-96
Your Reference	----------	DUPKT3
	-	
Depth	----------	-
Date Sampled		31/05/2016
Type of sample		Soil
Date extracted	-	03/06/2016
Date analysed	-	06/06/2016
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Surrogate TCLMX	%	67

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	----------	NS1	NS2	NS3	NS4	CS1
	-					
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	8	<4	4	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	8	9	12	15
Copper	mg/kg	30	17	16	17	24
Lead	mg/kg	28	25	15	26	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	9	5	9	12
Zinc	mg/kg	47	55	37	66	59

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	----------	CS2	CS3	CS4	CS5	CS6
	-					
Depth	----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	5	6	7	12	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	15	18	15	14
Copper	mg/kg	20	22	29	33	38
Lead	mg/kg	18	20	21	28	36
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	10	18	12	9
Zinc	mg/kg	49	49	59	55	58

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-20	147823-23	147823-25	147823-27	147823-31
Your Reference	---------- -	TP2	TP3	TP4	TP5	TP7
Depth	----------	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	6	4	<4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	9	20	15	16
Copper	mg/kg	23	13	42	27	60
Lead	mg/kg	16	13	13	25	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	7	16	12	15
Zinc	mg/kg	37	24	33	61	31

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-34	147823-37	147823-39	147823-41	147823-43
Your Reference	---------- -	TP8	TP9	TP10	TP11	TP12
Depth	----------	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	6	4	7	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	8	13	13	10
Copper	mg/kg	17	10	26	30	13
Lead	mg/kg	36	10	23	14	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	7	14	13	16
Zinc	mg/kg	71	27	50	41	25

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-46	147823-49	147823-51	147823-54	147823-58
Your Reference	---------- -	TP13	TP14	TP15	TP16	TP17
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	7	5	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	0.9	<0.4	<0.4
Chromium	mg/kg	19	9	11	6	10
Copper	mg/kg	39	18	21	31	24
Lead	mg/kg	22	16	19	16	26
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	8	12	8	6
Zinc	mg/kg	50	39	48	31	38

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-60	147823-62	147823-67	147823-70	147823-72
Your Reference	---------- -	TP18	TP19	TP21	TP22	TP23
Depth	----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	7	<4	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	6	19	16	13
Copper	mg/kg	10	8	58	14	22
Lead	mg/kg	28	7	8	28	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	4	12	10	10
Zinc	mg/kg	26	19	30	54	41

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-75	147823-79	147823-82	147823-84	147823-86
Your Reference	---------- -	TP24	TP25	TP26	TP27	TP28
Depth	----------	0.0-0.05	0.4-0.6	0.2-0.4	0.0-0.15	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	<4	<4	<4	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	6	8	14	11
Copper	mg/kg	38	7	13	60	21
Lead	mg/kg	10	8	7	9	22
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	15	5	5	15	12
Zinc	mg/kg	40	21	19	32	47

Acid Extractable metals in soil						
Our Reference:	UNITS	147823-87	147823-91	147823-92	147823-93	147823-95
Your Reference	---------- -	TP29	TP31	TP32	TP33	DUPKT1
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	-
Date Sampled		1/06/2016	1/06/2016	1/06/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Arsenic	mg/kg	<4	<4	6	6	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	11	12	13	14
Copper	mg/kg	15	23	19	21	22
Lead	mg/kg	25	19	18	20	22
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	9	11	12	12
Zinc	mg/kg	53	46	33	33	40

Acid Extractable metals in soil			
Our Reference:	UNITS	147823-96	147823-97
Your Reference	---------- -	DUPKT3	NS1 - TRIPLICATE
Depth	----------	-	0.5
Date Sampled		31/05/2016	01/06/2016
Type of sample		Soil	Soil
Date prepared	-	03/06/2016	03/06/2016
Date analysed	-	03/06/2016	03/06/2016
Arsenic	mg/kg	6	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	12	10
Copper	mg/kg	23	22
Lead	mg/kg	19	25
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	11	8
Zinc	mg/kg	38	50

Moisture						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	---------- -	NS1	NS2	NS3	NS4	CS1
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	6.7	7.5	6.4	6.9	8.0

Moisture						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	---------- -	CS2	CS3	CS4	CS5	CS6
Depth	----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	9.3	9.0	12	11	18

Moisture						
Our Reference:	UNITS	147823-20	147823-23	147823-25	147823-27	147823-31
Your Reference	---------- -	TP2	TP3	TP4	TP5	TP7
Depth	----------	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	11	6.5	7.1	13	8.4

Moisture						
Our Reference:	UNITS	147823-34	147823-37	147823-39	147823-41	147823-43
Your Reference	---------- -	TP8	TP9	TP10	TP11	TP12
Depth	----------	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	15	13	12	6.3	9.5

Moisture Our Reference: Your Reference	UNITS ----------	147823-46 TP13	147823-49 TP14	147823-51 TP15	147823-54 TP16	147823-58 TP17
	-					
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	11	9.1	13	8.4	11

Moisture Our Reference: Your Reference	UNITS ----------	147823-60 TP18	147823-62 TP19	147823-67 TP21	147823-70 TP22	147823-72 TP23
	-					
Depth	----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	9.1	26	3.2	15	9.4

Moisture Our Reference: Your Reference	UNITS ----------	147823-75 TP24	147823-79 TP25	147823-82 TP26	147823-84 TP27	147823-86 TP28
	-					
Depth	----------	0.0-0.05	0.4-0.6	0.2-0.4	0.0-0.15	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	9.6	13	14	6.3	11

Moisture Our Reference: Your Reference	UNITS ----------	147823-87 TP29	147823-91 TP31	147823-92 TP32	147823-93 TP33	147823-95 DUPKT1
	-					
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	-
Date Sampled		1/06/2016	1/06/2016	1/06/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Date analysed	-	3/06/2016	3/06/2016	3/06/2016	3/06/2016	3/06/2016
Moisture	%	9.1	8.0	11	7.6	11

Moisture		
Our Reference:	UNITS	147823-96
Your Reference	----------	DUPKT3
	-	
Depth	----------	-
Date Sampled		31/05/2016
Type of sample		Soil
Date prepared	-	3/06/2016
Date analysed	-	3/06/2016
Moisture	%	11

Asbestos ID - soils						
Our Reference:	UNITS	147823-1	147823-3	147823-5	147823-6	147823-7
Your Reference	---------- -	NS1	NS2	NS3	NS4	CS1
Depth	----------	0.5	0.5	0.5	0.5	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 45g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	147823-9	147823-11	147823-12	147823-13	147823-14
Your Reference	---------- -	CS2	CS3	CS4	CS5	CS6
Depth	----------	1	1	1.2	1	1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 30g	Approx. 40g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	147823-20	147823-23	147823-25	147823-27	147823-31
Your Reference	---------- -	TP2	TP3	TP4	TP5	TP7
Depth	----------	0.0-0.1	0.25-0.45	0.0-0.25	0.0-0.1	0.0-0.1
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 25g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Black bituminous soil	Red clayey soil	Black bituminous soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	147823-34	147823-37	147823-39	147823-41	147823-43
Your Reference	---------- -	TP8	TP9	TP10	TP11	TP12
Depth	----------	0.0-0.1	0.15-0.35	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 20g	Approx. 50g	Approx. 30g	Approx. 45g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	147823-46	147823-49	147823-51	147823-54	147823-58
Your Reference	---------- -	TP13	TP14	TP15	TP16	TP17
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 30g	32.33	Approx. 35g	Approx. 30g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	147823-60	147823-62	147823-67	147823-70	147823-72
Your Reference	---------- -	TP18	TP19	TP21	TP22	TP23
Depth	----------	0.0-0.2	0.1-0.3	0.0-0.1	0.0-0.2	0.1-0.25
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 35g	Approx. 40g	Approx. 60g	Approx. 30g	Approx. 55g
Sample Description	-	Brown coarse-grained soil & rocks	Beige coarse-grained soil & rocks	Black bituminous soil	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	147823-75	147823-79	147823-82	147823-84	147823-86
Your Reference	---------- -	TP24	TP25	TP26	TP27	TP28
Depth	----------	0.0-0.05	0.4-0.6	0.2-0.4	0.0-0.15	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 40g	Approx. 45g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Black bituminous soil	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils					
Our Reference:	UNITS	147823-87	147823-91	147823-92	147823-93
Your Reference	---------- -	TP29	TP31	TP32	TP33
Depth	----------	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016	31/05/2016
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	7/06/2016	7/06/2016	7/06/2016	7/06/2016
Sample mass tested	g	Approx. 35g	Approx. 50g	Approx. 30g	Approx. 35g
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference:	UNITS	147823-2	147823-4	147823-8	147823-10	147823-15
Your Reference	---------- -	NS1	NS2	CS1	CS2	SS01
Depth	----------	0.5	0.5	1	1	-
Date Sampled		31/05/2016	31/05/2016	31/05/2016	31/05/2016	31/05/2016
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	6/06/2016	6/06/2016	6/06/2016	6/06/2016	6/06/2016
Mass / Dimension of Sample	-	65x55x5mm	82x60x5mm	60x55x4mm	70x52x5mm	35x22x2mm
Sample Description	-	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Date analysed	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
TRHC$_6$ - C$_9$	mg/kg	25	Org-016	<25	147823-1	<25 || <25	LCS-9	110%
TRHC$_6$ - C$_{10}$	mg/kg	25	Org-016	<25	147823-1	<25 || <25	LCS-9	110%
Benzene	mg/kg	0.2	Org-016	<0.2	147823-1	<0.2 || <0.2	LCS-9	95%
Toluene	mg/kg	0.5	Org-016	<0.5	147823-1	<0.5 || <0.5	LCS-9	104%
Ethylbenzene	mg/kg	1	Org-016	<1	147823-1	<1 || <1	LCS-9	113%
m+p-xylene	mg/kg	2	Org-016	<2	147823-1	<2 || <2	LCS-9	120%
o-Xylene	mg/kg	1	Org-016	<1	147823-1	<1 || <1	LCS-9	110%
naphthalene	mg/kg	1	Org-014	<1	147823-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	102	147823-1	100 || 95 || RPD: 5	LCS-9	102%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Date analysed	-			05/06/2016	147823-1	05/06/2016 || 05/06/2016	LCS-9	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	50	Org-003	<50	147823-1	<50 || <50	LCS-9	129%
TRHC$_{15}$ - C$_{28}$	mg/kg	100	Org-003	<100	147823-1	<100 || <100	LCS-9	129%
TRHC$_{29}$ - C$_{36}$	mg/kg	100	Org-003	<100	147823-1	<100 || <100	LCS-9	120%
TRH>C$_{10}$-C$_{16}$	mg/kg	50	Org-003	<50	147823-1	<50 || <50	LCS-9	129%
TRH>C$_{16}$-C$_{34}$	mg/kg	100	Org-003	<100	147823-1	<100 || <100	LCS-9	129%
TRH>C$_{34}$-C$_{40}$	mg/kg	100	Org-003	<100	147823-1	<100 || <100	LCS-9	120%
Surrogate o-Terphenyl	%		Org-003	83	147823-1	97 || 98 || RPD: 1	LCS-9	95%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Date analysed	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Naphthalene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	LCS-9	124%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	LCS-9	124%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	LCS-9	134%
Anthracene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	LCS-9	123%
Pyrene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	LCS-9	122%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	LCS-9	71%
Benzo(b,j +k)fluoranthene	mg/kg	0.2	Org-012	<0.2	147823-1	<0.2 || <0.2	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	147823-1	<0.05 || <0.05	LCS-9	127%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	101	147823-1	97 || 99 || RPD: 2	LCS-9	111%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Date analysed	-			06/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
HCB	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	91%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	100%
Heptachlor	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	81%
delta-BHC	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	75%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	81%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	80%
Dieldrin	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	71%
Endrin	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	70%
pp-DDD	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	70%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	LCS-9	70%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	74	147823-1	73 || 73 || RPD: 0	LCS-9	79%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Date analysed	-			06/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	LCS-9	114%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	147823-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	74	147823-1	73 || 73 || RPD: 0	LCS-9	74%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Date analysed	-			03/06/2016	147823-1	03/06/2016 || 03/06/2016	LCS-9	03/06/2016
Arsenic	mg/kg	4	Metals-020	<4	147823-1	8 || <4	LCS-9	115%
Cadmium	mg/kg	0.4	Metals-020	<0.4	147823-1	<0.4 || <0.4	LCS-9	121%
Chromium	mg/kg	1	Metals-020	<1	147823-1	8 || 9 || RPD: 12	LCS-9	113%
Copper	mg/kg	1	Metals-020	<1	147823-1	30 || 15 || RPD: 67	LCS-9	111%
Lead	mg/kg	1	Metals-020	<1	147823-1	28 || 26 || RPD: 7	LCS-9	111%
Mercury	mg/kg	0.1	Metals-021	<0.1	147823-1	<0.1 || <0.1	LCS-9	97%
Nickel	mg/kg	1	Metals-020	<1	147823-1	6 || 6 || RPD: 0	LCS-9	109%
Zinc	mg/kg	1	Metals-020	<1	147823-1	47 || 47 || RPD: 0	LCS-9	110%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Date analysed	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
$TRHC_6 - C_9$	mg/kg	147823-11	<25 || <25	LCS-10	104%
$TRHC_6 - C_{10}$	mg/kg	147823-11	<25 || <25	LCS-10	104%
Benzene	mg/kg	147823-11	<0.2 || <0.2	LCS-10	88%
Toluene	mg/kg	147823-11	<0.5 || <0.5	LCS-10	96%
Ethylbenzene	mg/kg	147823-11	<1 || <1	LCS-10	106%
m+p-xylene	mg/kg	147823-11	<2 || <2	LCS-10	114%
o-Xylene	mg/kg	147823-11	<1 || <1	LCS-10	104%
naphthalene	mg/kg	147823-11	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	147823-11	94 || 96 || RPD: 2	LCS-10	93%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Date analysed	-	147823-11	05/06/2016 || 05/06/2016	LCS-10	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	147823-11	<50 || <50	LCS-10	111%
TRHC$_{15}$ - C$_{28}$	mg/kg	147823-11	<100 || <100	LCS-10	108%
TRHC$_{29}$ - C$_{36}$	mg/kg	147823-11	<100 || <100	LCS-10	128%
TRH>C$_{10}$-C$_{16}$	mg/kg	147823-11	<50 || <50	LCS-10	111%
TRH>C$_{16}$-C$_{34}$	mg/kg	147823-11	<100 || <100	LCS-10	108%
TRH>C$_{34}$-C$_{40}$	mg/kg	147823-11	<100 || <100	LCS-10	128%
Surrogate o-Terphenyl	%	147823-11	82 || 84 || RPD: 2	LCS-10	93%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Date analysed	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Naphthalene	mg/kg	147823-11	<0.1 || <0.1	LCS-10	122%
Acenaphthylene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	147823-11	<0.1 || <0.1	LCS-10	119%
Phenanthrene	mg/kg	147823-11	<0.1 || <0.1	LCS-10	134%
Anthracene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	147823-11	<0.1 || <0.1	LCS-10	116%
Pyrene	mg/kg	147823-11	<0.1 || <0.1	LCS-10	124%
Benzo(a)anthracene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	147823-11	<0.1 || <0.1	LCS-10	71%
Benzo(b,j+k)fluoranthene	mg/kg	147823-11	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	147823-11	<0.05 || <0.05	LCS-10	113%
Indeno(1,2,3-c,d)pyrene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	147823-11	99 || 93 || RPD: 6	LCS-10	99%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Date analysed	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	06/06/2016
HCB	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	147823-11	<0.1 || <0.1	LCS-10	66%
gamma-BHC	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	147823-11	<0.1 || <0.1	LCS-10	102%
Heptachlor	mg/kg	147823-11	<0.1 || <0.1	LCS-10	65%
delta-BHC	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	147823-11	<0.1 || <0.1	LCS-10	76%
Heptachlor Epoxide	mg/kg	147823-11	<0.1 || <0.1	LCS-10	70%
gamma-Chlordane	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	147823-11	<0.1 || <0.1	LCS-10	72%
Dieldrin	mg/kg	147823-11	<0.1 || <0.1	LCS-10	72%
Endrin	mg/kg	147823-11	<0.1 || <0.1	LCS-10	71%
pp-DDD	mg/kg	147823-11	<0.1 || <0.1	LCS-10	77%
Endosulfan II	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	147823-11	<0.1 || <0.1	LCS-10	70%
Methoxychlor	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	147823-11	71 || 71 || RPD: 0	LCS-10	76%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Date analysed	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	06/06/2016
Aroclor 1016	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	147823-11	<0.1 || <0.1	LCS-10	113%
Aroclor 1260	mg/kg	147823-11	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	147823-11	71 || 71 || RPD: 0	LCS-10	76%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Date analysed	-	147823-11	03/06/2016 || 03/06/2016	LCS-10	03/06/2016
Arsenic	mg/kg	147823-11	6 || 7 || RPD: 15	LCS-10	111%
Cadmium	mg/kg	147823-11	<0.4 || <0.4	LCS-10	117%
Chromium	mg/kg	147823-11	15 || 14 || RPD: 7	LCS-10	110%
Copper	mg/kg	147823-11	22 || 26 || RPD: 17	LCS-10	108%
Lead	mg/kg	147823-11	20 || 23 || RPD: 14	LCS-10	106%
Mercury	mg/kg	147823-11	<0.1 || <0.1	LCS-10	98%
Nickel	mg/kg	147823-11	10 || 9 || RPD: 11	LCS-10	106%
Zinc	mg/kg	147823-11	49 || 47 || RPD: 4	LCS-10	106%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Date analysed	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
$TRHC_6$ - C_9	mg/kg	147823-34	<25 || <25	147823-3	96%
$TRHC_6$ - C_{10}	mg/kg	147823-34	<25 || <25	147823-3	96%
Benzene	mg/kg	147823-34	<0.2 || <0.2	147823-3	83%
Toluene	mg/kg	147823-34	<0.5 || <0.5	147823-3	90%
Ethylbenzene	mg/kg	147823-34	<1 || <1	147823-3	98%
m+p-xylene	mg/kg	147823-34	<2 || <2	147823-3	105%
o-Xylene	mg/kg	147823-34	<1 || <1	147823-3	96%
naphthalene	mg/kg	147823-34	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	147823-34	102 || 100 || RPD: 2	147823-3	98%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-34	03/06/2016 || 03/06/2016	147823-3	3/06/2016
Date analysed	-	147823-34	05/06/2016 || 05/06/2016	147823-3	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	147823-34	<50 || <50	147823-3	116%
TRHC$_{15}$ - C$_{28}$	mg/kg	147823-34	<100 || <100	147823-3	129%
TRHC$_{29}$ - C$_{36}$	mg/kg	147823-34	520 || 480 || RPD: 8	147823-3	118%
TRH>C$_{10}$-C$_{16}$	mg/kg	147823-34	<50 || <50	147823-3	116%
TRH>C$_{16}$-C$_{34}$	mg/kg	147823-34	500 || 470 || RPD: 6	147823-3	129%
TRH>C$_{34}$-C$_{40}$	mg/kg	147823-34	400 || 380 || RPD: 5	147823-3	118%
Surrogate o-Terphenyl	%	147823-34	93 || 88 || RPD: 6	147823-3	86%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Date analysed	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Naphthalene	mg/kg	147823-34	<0.1 || <0.1	147823-3	109%
Acenaphthylene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	147823-34	<0.1 || <0.1	147823-3	115%
Phenanthrene	mg/kg	147823-34	<0.1 || <0.1	147823-3	126%
Anthracene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	147823-34	<0.1 || <0.1	147823-3	113%
Pyrene	mg/kg	147823-34	<0.1 || <0.1	147823-3	122%
Benzo(a)anthracene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	147823-34	<0.1 || <0.1	147823-3	75%
Benzo(b,j+k)fluoranthene	mg/kg	147823-34	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	147823-34	<0.05 || <0.05	147823-3	120%
Indeno(1,2,3-c,d)pyrene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	147823-34	100 || 102 || RPD: 2	147823-3	99%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Date analysed	-	147823-34	06/06/2016 || 06/06/2016	147823-3	03/06/2016
HCB	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	147823-34	<0.1 || <0.1	147823-3	63%
gamma-BHC	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	147823-34	<0.1 || <0.1	147823-3	98%
Heptachlor	mg/kg	147823-34	<0.1 || <0.1	147823-3	80%
delta-BHC	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	147823-34	<0.1 || <0.1	147823-3	92%
Heptachlor Epoxide	mg/kg	147823-34	<0.1 || <0.1	147823-3	61%
gamma-Chlordane	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	147823-34	<0.1 || <0.1	147823-3	70%
Dieldrin	mg/kg	147823-34	<0.1 || <0.1	147823-3	70%
Endrin	mg/kg	147823-34	<0.1 || <0.1	147823-3	69%
pp-DDD	mg/kg	147823-34	<0.1 || <0.1	147823-3	72%
Endosulfan II	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	147823-34	<0.1 || <0.1	147823-3	73%
Methoxychlor	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	147823-34	77 || 80 || RPD: 4	147823-3	77%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Date analysed	-	147823-34	06/06/2016 || 06/06/2016	147823-3	03/06/2016
Aroclor 1016	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	147823-34	<0.1 || <0.1	147823-3	111%
Aroclor 1260	mg/kg	147823-34	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	147823-34	77 || 80 || RPD: 4	147823-3	72%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Date analysed	-	147823-34	03/06/2016 || 03/06/2016	147823-3	03/06/2016
Arsenic	mg/kg	147823-34	6 || 6 || RPD: 0	147823-3	99%
Cadmium	mg/kg	147823-34	<0.4 || <0.4	147823-3	99%
Chromium	mg/kg	147823-34	14 || 12 || RPD: 15	147823-3	102%
Copper	mg/kg	147823-34	17 || 19 || RPD: 11	147823-3	103%
Lead	mg/kg	147823-34	36 || 34 || RPD: 6	147823-3	83%
Mercury	mg/kg	147823-34	<0.1 || <0.1	147823-3	95%
Nickel	mg/kg	147823-34	10 || 10 || RPD: 0	147823-3	88%
Zinc	mg/kg	147823-34	71 || 67 || RPD: 6	147823-3	90%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Date analysed	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
TRHC_6 - C_9	mg/kg	147823-62	<25 || <25	147823-37	107%
TRHC_6 - C_{10}	mg/kg	147823-62	<25 || <25	147823-37	107%
Benzene	mg/kg	147823-62	<0.2 || <0.2	147823-37	91%
Toluene	mg/kg	147823-62	<0.5 || <0.5	147823-37	101%
Ethylbenzene	mg/kg	147823-62	<1 || <1	147823-37	106%
m+p-xylene	mg/kg	147823-62	<2 || <2	147823-37	119%
o-Xylene	mg/kg	147823-62	<1 || <1	147823-37	106%
naphthalene	mg/kg	147823-62	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	147823-62	88 || 90 || RPD: 2	147823-37	104%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-62	03/06/2016 || 03/06/2016	147823-37	3/06/2016
Date analysed	-	147823-62	06/06/2016 || 06/06/2016	147823-37	05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	147823-62	<50 || <50	147823-37	130%
TRHC$_{15}$ - C$_{28}$	mg/kg	147823-62	<100 || <100	147823-37	123%
TRHC$_{29}$ - C$_{36}$	mg/kg	147823-62	<100 || <100	147823-37	106%
TRH>C$_{10}$-C$_{16}$	mg/kg	147823-62	<50 || <50	147823-37	130%
TRH>C$_{16}$-C$_{34}$	mg/kg	147823-62	<100 || <100	147823-37	123%
TRH>C$_{34}$-C$_{40}$	mg/kg	147823-62	<100 || <100	147823-37	106%
Surrogate o-Terphenyl	%	147823-62	82 || 82 || RPD: 0	147823-37	86%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Date analysed	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Naphthalene	mg/kg	147823-62	<0.1 || <0.1	147823-37	114%
Acenaphthylene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	147823-62	<0.1 || <0.1	147823-37	119%
Phenanthrene	mg/kg	147823-62	<0.1 || <0.1	147823-37	121%
Anthracene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	147823-62	0.1 || <0.1	147823-37	125%
Pyrene	mg/kg	147823-62	0.1 || <0.1	147823-37	131%
Benzo(a)anthracene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	147823-62	<0.1 || <0.1	147823-37	65%
Benzo(b,j+k)fluoranthene	mg/kg	147823-62	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	147823-62	<0.05 || <0.05	147823-37	101%
Indeno(1,2,3-c,d)pyrene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	147823-62	103 || 102 || RPD: 1	147823-37	110%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Date analysed	-	147823-62	06/06/2016 || 06/06/2016	147823-37	06/06/2016
HCB	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	147823-62	<0.1 || <0.1	147823-37	61%
gamma-BHC	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	147823-62	<0.1 || <0.1	147823-37	90%
Heptachlor	mg/kg	147823-62	<0.1 || <0.1	147823-37	65%
delta-BHC	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	147823-62	<0.1 || <0.1	147823-37	85%
Heptachlor Epoxide	mg/kg	147823-62	<0.1 || <0.1	147823-37	61%
gamma-Chlordane	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	147823-62	<0.1 || <0.1	147823-37	60%
Dieldrin	mg/kg	147823-62	<0.1 || <0.1	147823-37	67%
Endrin	mg/kg	147823-62	<0.1 || <0.1	147823-37	63%
pp-DDD	mg/kg	147823-62	<0.1 || <0.1	147823-37	65%
Endosulfan II	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	147823-62	<0.1 || <0.1	147823-37	71%
Methoxychlor	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	147823-62	70 || 73 || RPD: 4	147823-37	69%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Date analysed	-	147823-62	06/06/2016 || 06/06/2016	147823-37	06/06/2016
Aroclor 1016	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	147823-62	<0.1 || <0.1	147823-37	110%
Aroclor 1260	mg/kg	147823-62	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	147823-62	70 || 73 || RPD: 4	147823-37	69%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Date analysed	-	147823-62	03/06/2016 || 03/06/2016	147823-37	03/06/2016
Arsenic	mg/kg	147823-62	<4 || <4	147823-37	97%
Cadmium	mg/kg	147823-62	<0.4 || <0.4	147823-37	99%
Chromium	mg/kg	147823-62	6 || 8 || RPD: 29	147823-37	100%
Copper	mg/kg	147823-62	8 || 6 || RPD: 29	147823-37	112%
Lead	mg/kg	147823-62	7 || 8 || RPD: 13	147823-37	100%
Mercury	mg/kg	147823-62	<0.1 || <0.1	147823-37	97%
Nickel	mg/kg	147823-62	4 || 6 || RPD: 40	147823-37	93%
Zinc	mg/kg	147823-62	19 || 22 || RPD: 15	147823-37	93%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	147823-91	03/06/2016 || 03/06/2016	LCS-2	03/06/2016
Date analysed	-	147823-91	03/06/2016 || 03/06/2016	LCS-2	03/06/2016
$TRHC_6 - C_9$	mg/kg	147823-91	<25 || <25	LCS-2	103%
$TRHC_6 - C_{10}$	mg/kg	147823-91	<25 || <25	LCS-2	103%
Benzene	mg/kg	147823-91	<0.2 || <0.2	LCS-2	88%
Toluene	mg/kg	147823-91	<0.5 || <0.5	LCS-2	96%
Ethylbenzene	mg/kg	147823-91	<1 || <1	LCS-2	104%
m+p-xylene	mg/kg	147823-91	<2 || <2	LCS-2	113%
o-Xylene	mg/kg	147823-91	<1 || <1	LCS-2	101%
naphthalene	mg/kg	147823-91	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	147823-91	103 || 95 || RPD: 8	LCS-2	106%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	147823-91	03/06/2016 || 03/06/2016
Date analysed	-	147823-91	05/06/2016 || 05/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	147823-91	<50 || <50
TRHC$_{15}$ - C$_{28}$	mg/kg	147823-91	170 || 100 || RPD: 52
TRHC$_{29}$ - C$_{36}$	mg/kg	147823-91	410 || 310 || RPD: 28
TRH>C$_{10}$-C$_{16}$	mg/kg	147823-91	<50 || <50
TRH>C$_{16}$-C$_{34}$	mg/kg	147823-91	450 || 250 || RPD: 57
TRH>C$_{34}$-C$_{40}$	mg/kg	147823-91	620 || 610 || RPD: 2
Surrogate o-Terphenyl	%	147823-91	97 || 92 || RPD: 5

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	147823-91	03/06/2016 || 03/06/2016
Date analysed	-	147823-91	03/06/2016 || 03/06/2016
Naphthalene	mg/kg	147823-91	<0.1 || <0.1
Acenaphthylene	mg/kg	147823-91	0.4 || 0.1 || RPD: 120
Acenaphthene	mg/kg	147823-91	<0.1 || <0.1
Fluorene	mg/kg	147823-91	<0.1 || <0.1
Phenanthrene	mg/kg	147823-91	1.6 || 1.6 || RPD: 0
Anthracene	mg/kg	147823-91	0.5 || 0.3 || RPD: 50
Fluoranthene	mg/kg	147823-91	3.2 || 3.1 || RPD: 3
Pyrene	mg/kg	147823-91	3.2 || 3.3 || RPD: 3
Benzo(a)anthracene	mg/kg	147823-91	1.1 || 1.3 || RPD: 17
Chrysene	mg/kg	147823-91	1.3 || 0.9 || RPD: 36
Benzo(b,j+k)fluoranthene	mg/kg	147823-91	2.7 || 2 || RPD: 30
Benzo(a)pyrene	mg/kg	147823-91	1.8 || 1.1 || RPD: 48
Indeno(1,2,3-c,d)pyrene	mg/kg	147823-91	1.3 || 1.1 || RPD: 17
Dibenzo(a,h)anthracene	mg/kg	147823-91	0.3 || 0.1 || RPD: 100
Benzo(g,h,i)perylene	mg/kg	147823-91	1.7 || 1.0 || RPD: 52
Surrogate p-Terphenyl-d14	%	147823-91	75 || 106 || RPD: 34

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	147823-91	03/06/2016 || 03/06/2016
Date analysed	-	147823-91	06/06/2016 || 06/06/2016
HCB	mg/kg	147823-91	<0.1 || <0.1
alpha-BHC	mg/kg	147823-91	<0.1 || <0.1
gamma-BHC	mg/kg	147823-91	<0.1 || <0.1
beta-BHC	mg/kg	147823-91	<0.1 || <0.1
Heptachlor	mg/kg	147823-91	<0.1 || <0.1
delta-BHC	mg/kg	147823-91	<0.1 || <0.1
Aldrin	mg/kg	147823-91	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	147823-91	<0.1 || <0.1
gamma-Chlordane	mg/kg	147823-91	<0.1 || <0.1
alpha-chlordane	mg/kg	147823-91	<0.1 || <0.1
Endosulfan I	mg/kg	147823-91	<0.1 || <0.1
pp-DDE	mg/kg	147823-91	<0.1 || <0.1
Dieldrin	mg/kg	147823-91	<0.1 || <0.1
Endrin	mg/kg	147823-91	<0.1 || <0.1
pp-DDD	mg/kg	147823-91	<0.1 || <0.1
Endosulfan II	mg/kg	147823-91	<0.1 || <0.1
pp-DDT	mg/kg	147823-91	<0.1 || <0.1
Endrin Aldehyde	mg/kg	147823-91	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	147823-91	<0.1 || <0.1
Methoxychlor	mg/kg	147823-91	<0.1 || <0.1
Surrogate TCMX	%	147823-91	63 || 67 || RPD: 6

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	147823-91	03/06/2016 || 03/06/2016
Date analysed	-	147823-91	06/06/2016 || 06/06/2016
Aroclor 1016	mg/kg	147823-91	<0.1 || <0.1
Aroclor 1221	mg/kg	147823-91	<0.1 || <0.1
Aroclor 1232	mg/kg	147823-91	<0.1 || <0.1
Aroclor 1242	mg/kg	147823-91	<0.1 || <0.1
Aroclor 1248	mg/kg	147823-91	<0.1 || <0.1
Aroclor 1254	mg/kg	147823-91	<0.1 || <0.1
Aroclor 1260	mg/kg	147823-91	<0.1 || <0.1
Surrogate TCLMX	%	147823-91	63 || 67 || RPD: 6
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date prepared	-	147823-91	03/06/2016 || 03/06/2016
Date analysed	-	147823-91	03/06/2016 || 03/06/2016
Arsenic	mg/kg	147823-91	<4 || <4
Cadmium	mg/kg	147823-91	<0.4 || <0.4
Chromium	mg/kg	147823-91	11 || 11 || RPD: 0
Copper	mg/kg	147823-91	23 || 24 || RPD: 4
Lead	mg/kg	147823-91	19 || 21 || RPD: 10
Mercury	mg/kg	147823-91	<0.1 || <0.1
Nickel	mg/kg	147823-91	9 || 10 || RPD: 11
Zinc	mg/kg	147823-91	46 || 53 || RPD: 14

Report Comments:

Asbestos: A portion of the supplied samples were sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that these sub-samples are indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples 147823-1, 3, 7 & 9 were sub-sampled from jars provided by the client.

Sample 147823-49; Chrysotile asbestos identified in matted material, it is estimated to be 0.13g/kg in 32.33g of soil (i.e. > reporting limit for the method of 0.1g/kg).

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 147823-1 for Cu. Therefore a triplicate result has been issued as laboratory sample number 147823-97.

Asbestos ID was analysed by Approved Identifier: Paul Ching
Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test
NR: Test not required
<: Less than

PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than

NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E29442K	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 1 of 4	Attention: K.Taylor
Attention: Aileen		

Location: Minto
Sampler: K.Taylor

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 5a	BTEX	Asbestos
			material (layer)						
31/5/16	1,2	NS1	0-5	G,A	0	Fill	X		
	3,4	NS2	0.5	GA			X		
	5	NS3	0.5	GA			X		
	6	NS4	0.5	GA			X		
	7,8	CS1	1.0	GA			X		
	9,10	CS2	1.0	GA			X		
	11	CS3	1.0	GA			X		
	12	CS4	1.2	GA			X		
	13	CS5	1.0	GA			X		
↓	14	CS6	1.0	GA	↓	↓	X		
31/5	15	SS01	surface	A		material			X
	16	TB1		G		sand		X	
↓	17	TS1		G		sand		X	
31/5	18	TP1	0-02	GA	0	Fill			
	19	↓	0.4-0.5	G		Nat			
	20	TP2	0-01	GA		Fill	X		
	21	↓	0.3-0.4	G		Nat			
	22	TP3	0-0.2	GA		Fill			
	23	↓	0.25-0.45	GA		Fill	X		
	24	↓	0.45-0.6	G		Nat			
	25	TP4	0-0.25	GA		Fill	X		
	26	↓	0.3-0.5	G		Nat			
	27	TP5	(labelled as 0.0-0.1) 0-0.1	GA		Fill	X		
↓	28	↓	0.2-0.35	G	↓	Nat			

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 147823
Date Received: 2/6/16
Time Received: 12:00
Received by: KW
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):
Please send DUPKT2 to Melb Envirolab

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
VLT	2/6/16.	12:00	K.W.	2/6/16

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E29442K	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 2 of 4	Attention: K.Taylor
Attention: Aileen		

Location: Minto
Sampler: K.Taylor 147823

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 5a	BTEX	Asbestos
31/1/16	29	TP6	0-0.2	GA	0	Fill			
	30	↓	0.4-0.5	G		Nat			
	31	TP7	0-0.1	GA		Fill	X		
	32		0.2-0.4	GA		Fill			
	33	↓	0.45-0.65	G		Nat			
	34	TP8	0-0.1	GA		Fill	X		
	35	↓	0.3-0.4	G		Nat			
	36	TP9	0-0.05	GA		Fill			
	37		0.15-0.35	GA		Fill	X		
	38	↓	0.4-0.5	G		Nat			
	39	TP10	0-0.2	GA		Fill	X		
	40	↓	0.3-0.5	G		Nat			
	41	TP11	0-0.1	GA		Fill	X		
	42	↓	0.15-0.3	G		Nat			
	43	TP12	0-0.2	GA		Fill	X		
	44		0.3-0.5	GA		Fill			
	45	↓	0.6-0.7	G		Nat			
	46	TP13	0-0.2	GA		Fill	X		
	47		0.2-0.3	GA		Fill			
	48	↓	0.4-0.6	G		Nat			
	49	TP14	0-0.2	GA		Fill	X		
	50	↓	0.5-0.7	G		Nat			
	51	TP15	0-0.2	GA		Fill	X		
	52		0.2-0.4	GA		Fill			
↓	53	↓	0.5-0.7	G	↓	Nat			

Remarks (comments/detection limits required):
Please send DUPKT2 to Melb Envirolab.

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
KLT	2/6/16			2/6/15

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E29442K	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 3 of 4	Attention: K.Taylor
Attention: Aileen		

Location: Minto
Sampler: K.Taylor

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref: 14.782	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 5a	BTEX	Asbestos
1/6/16	54	TP16	0-0.2	G A	0	Fill	X		
	55	↓	0.2-0.4	G A		Fill			
	56	↓	0.8-1.0	G		Nat			
	57	TP17	0-0.05	G A		Fill			
	58	↓	0.2-0.4	G A		Fill	X		
	59	↓	0.5-0.7	G		Nat			
	60	TP18	0-0.2	G A		Fill	X		
	61	TP19	0-0.05	G A		Fill			
	62	↓	0.1-0.3	G A		Fill	X		
	63	↓	1.0-1.2	G		Nat			
	64	TP20	0-0.1	G A		Fill			
	65	↓	0.2-0.4	G A		Fill			
	66	↓	1.0-1.1	G		Nat			
	67	TP21	0-0.1	G A		Fill	X		
	68	↓	0.1-0.2	G A		Fill			
	69	↓	0.2-0.4	G		Nat			
	70	TP22	0-0.2	G A		Fill	X		
	71	TP23	0-0.1	G A		Fill			
	72	↓	0.1-0.25	G A		Fill	X		
	73	↓	0.4-0.6	G A		fill			
	74	↓	1-1.2	G		Nat			
	75	TP24	0-0.05	G A		Fill	X		
↓	76	↓	0.1-0.3	G	↓	Nat			

Remarks (comments/detection limits required):
Please send DUP#2 to Melb Envirolab

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
KT	2/6/16		捷	2/6/16

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E29442K	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 4 of 4	Attention: K.Taylor
Attention: Aileen		

Location: Minto

Sampler: K.Taylor

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number (147823)	Depth (m)	Sample Container	PID	Sample Description	Combo 5a	BTEX	Asbestos	Combo 5
1/6/16	77	TP25	0-0.1	G A	0	Fill				
	78		0.1-0.3	G A		Fill				
	79		0.4-0.6	G A		Fill	X			
	80		065-085	G		Nat				
	81	TP26	0-0.05	G A		Fill				
	82		0.2-0.4	G A		Fill	X			
	83		0.55-0.75	G		Nat				
	84	TP27	0-0.15	G A		Fill	X			
	85		0.2-0.4	G		Nat				
	86	TP28	0-0.2	G A		Fill	X			
	87	TP29	0-0.2	G A		Fill	X			
	88	TP30	0-0.1	G A		Fill				
	89		0.1-0.3	G A		Fill				
	90		0.4-0.6	G		Nat				
	91	TP31	0-0.2	G A		Fill	X			
	92	TP32	0-0.2	G A		Fill	X			
31/5/16	93	TP33	0-0.2	G A		Fill	X			
	94		0.4-0.5	G		Nat				
	95	DUPKT1		G						X
	*	DUPKT2		G						X
	96	DUPKT3		G						X

Remarks (comments/detection limits required): Please Send DUPKT2 to Melb enviolab.

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
KRT	2/6/16			2/6/16

12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 147823-A

Client:

Environmental Investigation Services
PO Box 976
North Ryde BC
NSW 1670

Attention: K Taylor

Sample log in details:

Your Reference:	**E29448K, Minto**
No. of samples:	5 Materials, 91 Soils
Date samples received / completed instructions received	02/06/16 / 16/06/16

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	23/06/16 / 21/06/16
Date of Preliminary Report:	Not Issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil					
Our Reference:	UNITS	147823-A-19	147823-A-30	147823-A-66	147823-A-90
Your Reference	---------- -	TP1	TP6	TP20	TP30
Depth	----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	94	94	79

svTRH (C10-C40) in Soil					
Our Reference:	UNITS	147823-A-19	147823-A-30	147823-A-66	147823-A-90
Your Reference	----------	TP1	TP6	TP20	TP30
	-				
Depth	----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
$TRHC_{10}$ - C_{14}	mg/kg	<50	<50	<50	<50
$TRHC_{15}$ - C_{28}	mg/kg	<100	<100	<100	<100
$TRHC_{29}$ - C_{36}	mg/kg	<100	<100	<100	<100
$TRH>C_{10}$-C_{16}	mg/kg	<50	<50	<50	<50
$TRH>C_{10}$ - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
$TRH>C_{16}$-C_{34}	mg/kg	<100	<100	<100	<100
$TRH>C_{34}$-C_{40}	mg/kg	<100	<100	<100	<100
Surrogate o-Terphenyl	%	72	72	70	70

PAHs in Soil Our Reference: Your Reference	UNITS ---------- -	147823-A-19 TP1	147823-A-30 TP6	147823-A-66 TP20	147823-A-90 TP30
Depth	----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	94	94	90	93

Organochlorine Pesticides in soil					
Our Reference:	UNITS	147823-A-19	147823-A-30	147823-A-66	147823-A-90
Your Reference	----------	TP1	TP6	TP20	TP30
	-				
Depth	----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	18/06/2016	18/06/2016	18/06/2016	18/06/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	86	82	86

PCBs in Soil Our Reference: Your Reference	UNITS ----------	147823-A-19 TP1	147823-A-30 TP6	147823-A-66 TP20	147823-A-90 TP30
Depth	-	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled	----------	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	18/06/2016	18/06/2016	18/06/2016	18/06/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	86	82	86

Acid Extractable metals in soil					
Our Reference:	UNITS	147823-A-19	147823-A-30	147823-A-66	147823-A-90
Your Reference	----------	TP1	TP6	TP20	TP30
	-				
Depth	----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Arsenic	mg/kg	7	5	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	11	14
Copper	mg/kg	24	23	17	27
Lead	mg/kg	17	17	20	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	12	10	10
Zinc	mg/kg	38	35	34	39

Moisture Our Reference: Your Reference	UNITS ----------	147823-A-19 TP1	147823-A-30 TP6	147823-A-66 TP20	147823-A-90 TP30
Depth	- ----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016
Date analysed	-	20/06/2016	20/06/2016	20/06/2016	20/06/2016
Moisture	%	11	13	18	20

Asbestos ID - soils					
Our Reference:	UNITS	147823-A-19	147823-A-30	147823-A-66	147823-A-90
Your Reference	---------- -	TP1	TP6	TP20	TP30
Depth	----------	0.4-0.5	0.4-0.5	1.0-1.1	0.4-0.6
Date Sampled		31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	21/06/2016	21/06/2016	21/06/2016	21/06/2016
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 40g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

PAHs in TCLP (USEPA 1311)						
Our Reference:	UNITS	147823-A-25	147823-A-31	147823-A-41	147823-A-67	147823-A-75
Your Reference	----------	TP4	TP7	TP11	TP21	TP24
	-					
Depth	----------	0.0-0.25	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		31/05/2016	31/05/2016	31/05/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	9.5	9.6	9.1	9.5	9.6
pH of soil TCLP (after HCl)	pH units	1.9	1.8	1.7	1.8	1.8
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.3	5.2	5.0	5.1	5.2
Date extracted	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016	18/06/2016
Date analysed	-	17/06/2016	17/06/2016	17/06/2016	17/06/2016	20/06/2016
Naphthalene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Acenaphthylene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Acenaphthene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Fluorene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Phenanthrene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Anthracene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Fluoranthene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Pyrene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chrysene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	101	106	114	109	107

PAHs in TCLP (USEPA 1311)				
Our Reference:	UNITS	147823-A-84	147823-A-87	147823-A-91
Your Reference	----------	TP27	TP29	TP31
	-			
Depth	----------	0.0-0.15	0.0-0.2	0.0-0.2
Date Sampled		1/06/2016	1/06/2016	1/06/2016
Type of sample		Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	9.7	10.5	10.0
pH of soil TCLP (after HCl)	pH units	1.7	1.8	1.9
Extraction fluid used	-	1	1	1
pH of final Leachate	pH units	5.0	7.3	6.4
Date extracted	-	18/06/2016	18/06/2016	18/06/2016
Date analysed	-	20/06/2016	20/06/2016	20/06/2016
Naphthalene in TCLP	mg/L	<0.001	<0.001	<0.001
Acenaphthylene in TCLP	mg/L	<0.001	<0.001	<0.001
Acenaphthene in TCLP	mg/L	<0.001	<0.001	<0.001
Fluorene in TCLP	mg/L	<0.001	<0.001	<0.001
Phenanthrene in TCLP	mg/L	<0.001	<0.001	<0.001
Anthracene in TCLP	mg/L	<0.001	<0.001	<0.001
Fluoranthene in TCLP	mg/L	<0.001	<0.001	<0.001
Pyrene in TCLP	mg/L	<0.001	<0.001	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001	<0.001	<0.001
Chrysene in TCLP	mg/L	<0.001	<0.001	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002	<0.002	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001	<0.001	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001	<0.001	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001	<0.001	<0.001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	103	117	109

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004.
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP).
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Org-012	Leachates are extracted with Dichloromethane and analysed by GC-MS.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Date analysed	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
TRHC6 - C9	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-4	108%
TRHC6 - C10	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-4	108%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-4	123%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-4	106%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-4	107%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-4	103%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-4	99%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	108	[NT]	[NT]	LCS-4	110%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/06/2016	[NT]	[NT]	LCS-4	16/06/2016
Date analysed	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
TRHC10 - C14	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-4	86%
TRHC15 - C28	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	74%
TRHC29 - C36	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	92%
TRH>C10-C16	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-4	86%
TRH>C16-C34	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	74%
TRH>C34-C40	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	92%
Surrogate o-Terphenyl	%		Org-003	76	[NT]	[NT]	LCS-4	83%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Date analysed	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-4	86%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-4	120%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-4	105%
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-4	92%
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-4	84%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-4	94%
Benzo(b,j +k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	LCS-4	102%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	97	[NT]	[NT]	LCS-4	112%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Date analysed	-			18/06/2016	[NT]	[NT]	LCS-4	18/06/2016
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	72%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	96%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	84%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	72%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	98%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	96%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	99%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	106%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	77%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	81%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	72	[NT]	[NT]	LCS-4	86%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Date analysed	-			18/06/2016	[NT]	[NT]	LCS-4	18/06/2016
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-4	101%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	72	[NT]	[NT]	LCS-4	71%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Date analysed	-			17/06/2016	[NT]	[NT]	LCS-4	17/06/2016
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	LCS-4	105%
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	LCS-4	102%
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-4	103%
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-4	106%
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-4	98%
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	LCS-4	91%
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-4	99%
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-4	100%
QUALITY CONTROL PAHs in TCLP (USEPA 1311)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			18/06/2016	[NT]	[NT]	LCS-W2	17/06/2016
Date analysed	-			20/06/2016	[NT]	[NT]	LCS-W2	17/06/2016
Naphthalene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	84%
Acenaphthylene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Acenaphthene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Fluorene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	104%
Phenanthrene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	96%
Anthracene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Fluoranthene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	84%
Pyrene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	80%
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Chrysene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	86%
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-012	<0.002	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in TCLP (USEPA 1311)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	LCS-W2	76%
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	92	[NT]	[NT]	LCS-W2	92%

Report Comments:

Organics tested outside Recommended holding time

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: All samples analysed for asbestos were sub-sampled from jars provided by the client.

Asbestos ID was analysed by Approved Identifier: Paul Ching
Asbestos ID was authorised by Approved Signatory: Paul Ching

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

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Aileen Hie

From: Katrina Taylor <KTaylor@jkgroup.net.au>
Sent: Thursday, 16 June 2016 9:22 AM
To: Nancy Zhang; Aileen Hie
Subject: RE: Results for Registration 147823 E29448K, Minto

Nancy / Aileen

Please undertake TCLP analysis for PAHs on the following eight samples:
TP4 (0.0-0.25) - 25
TP7 (0.0-0.1) - 31
TP11 (0.0-0.1) - 41
TP21 (0.0-0.1) - 67
TP24 (0.0-0.5) - 75.
TP27(0.0-0.15) - 84.
TP29 (0.0-0.2) - 87
TP31 (0.0-0.2) - 91

147823-A
Due 23/6

Please analyse the following samples for suite 5a
TP1 (0.4-0.5) - 19.
TP6 (0.4-0.5) - 30
TP20 (1.0-1.1) - 66
TP30 (0.4-0.6) - 90.

Thank you.

Regards,

Katrina Taylor
Environmental Scientist
KTaylor@jkgroup.net.au
www.jkgroup.net.au

Environmental Investigation Services
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
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T: +612 9888 5000 F: +612 9888 5001

From: Nancy Zhang [mailto:NZhang@envirolab.com.au]
Sent: Wednesday, 8 June 2016 7:36 PM
To: Katrina Taylor <KTaylor@jkgroup.net.au>
Subject: Results for Registration 147823 E29448K, Minto

16-18 Hayden Court, Myaree, Western Australia 6154
PO Box 4023 Myaree BC, Western Australia 6950
tel: +61 8 9317 2505
email: lab@mpl.com.au
envirolab.com.au
Envirolab Services (WA) Pty Ltd trading as
MPL Laboratories | ABN 53 140 099 207

CERTIFICATE OF ANALYSIS 181575

Client:
Environmental Investigation Services
115 Wicks Road
MACQUARIE PARK
NSW 2113

Attention: K. Taylor

Sample log in details:

Your Reference:	**E29448K**
No. of samples:	1 Soil
Date samples received:	03/06/2016
Date completed instructions received:	03/06/2016
Location:	

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last pages of this report for any comments relating to the results.

Report Details:

Date results requested by:	10/06/16
Date of Preliminary Report:	Not issued
Issue Date:	10/06/16

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Accredited for compliance with ISO/IEC 17025.
Tests not covered by NATA are denoted with *.

Results Approved By:

Joshua Lim
Operations Manager

ACCREDITED FOR TECHNICAL COMPETENCE

svTRH(C10-C36) in soil		
Our Reference:	UNITS	181575-1
Your Reference	----------	DUPKT2
Type of sample	----------	Soil
Date extracted	-	08/06/2016
Date analysed	-	08/06/2016
$TRHC_{10}$ - C_{14}	mg/kg	<50
$TRHC_{15}$ - C_{28}	mg/kg	<100
$TRHC_{29}$ - C_{36}	mg/kg	<100
$TRH{>}C_{10}$ - C_{16}	mg/kg	<50
$TRH{>}C_{10}$-C_{16} less N (F2)	mg/kg	<50
$TRH{>}C_{16}$ - C_{34}	mg/kg	<100
$TRH{>}C_{34}$ - C_{40}	mg/kg	<100
Surrogate o-Terphenyl	%	107

vTRH(C6-C10)/MBTEXN in soil Our Reference: Your Reference Type of sample	UNITS ---------- ----------	181575-1 DUPKT2 Soil
Date extracted	-	08/06/2016
Date analysed	-	09/06/2016
TRHC$_6$ - C$_9$	mg/kg	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25
TRHC$_6$-C$_{10}$ less BTEX (F1)	mg/kg	<25
MTBE	mg/kg	<0.5
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	90

PAHs in Soil Our Reference: Your Reference Type of sample	 UNITS ---------- ----------	 181575-1 DUPKT2 Soil
Date extracted	-	09/06/2016
Date analysed	-	09/06/2016
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Total Positive PAHs	mg/kg	NO +VE PAHS
p-Terphenyl-D_{14}	%	109

Organochlorine Pesticides in soil		
Our Reference:	UNITS	181575-1
Your Reference	----------	DUPKT2
Type of sample	----------	Soil
Date extracted	-	09/06/2016
Date analysed	-	09/06/2016
Hexachlorobenzene (HCB)	mg/kg	<0.1
a-BHC	mg/kg	<0.1
b-BHC	mg/kg	<0.1
Lindane (g-BHC)	mg/kg	<0.1
d-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
a-Chlordane	mg/kg	<0.1
g-Chlordane	mg/kg	<0.1
a-Endosulphan	mg/kg	<0.1
p,p'-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
p,p`-DDD	mg/kg	<0.1
b-Endosulphan	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
p,p'-DDT	mg/kg	<0.1
Endrin Ketone	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1

PCBs in Soil Our Reference: Your Reference Type of sample	UNITS ---------- ----------	181575-1 DUPKT2 Soil
Date extracted	-	09/06/2016
Date analysed	-	09/06/2016
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1

Acid Extractable metals in soil		
Our Reference:	UNITS	181575-1
Your Reference	----------	DUPKT2
Type of sample	----------	Soil
Date digested	-	08/06/2016
Date analysed	-	09/06/2016
Arsenic	mg/kg	<2
Cadmium	mg/kg	<0.4
Chromium	mg/kg	11
Copper	mg/kg	18
Lead	mg/kg	8
Mercury	mg/kg	<0.1
Nickel	mg/kg	21
Zinc	mg/kg	27

Moisture		
Our Reference:	UNITS	181575-1
Your Reference	----------	DUPKT2
Type of sample	----------	Soil
Date prepared	-	8/06/2016
Date analysed	-	9/06/2016
Moisture	%	8.5

Method ID	Methodology Summary
ORG-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
ORG-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
ORG-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM draft B1 Guideline on Investigation Levels for Soil and Groundwater.
ORG-012	For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
ORG-004	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
ORG-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
ORG-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
METALS-020	Metals in soil and water by ICP-OES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
INORG-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.

QUALITY CONTROL svTRH(C10-C36) in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			08/06/2016	[NT]	[NT]	LCS-1	08/06/2016
Date analysed	-			08/06/2016	[NT]	[NT]	LCS-1	08/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	50	ORG-003	<50	[NT]	[NT]	LCS-1	117%
TRHC$_{15}$ - C$_{28}$	mg/kg	100	ORG-003	<100	[NT]	[NT]	LCS-1	123%
TRHC$_{29}$ - C$_{36}$	mg/kg	100	ORG-003	<100	[NT]	[NT]	LCS-1	113%
TRH>C$_{10}$ - C$_{16}$	mg/kg	50	ORG-003	<50	[NT]	[NT]	LCS-1	122%
TRH>C$_{16}$ - C$_{34}$	mg/kg	100	ORG-003	<100	[NT]	[NT]	LCS-1	119%
TRH>C$_{34}$ - C$_{40}$	mg/kg	100	ORG-003	<100	[NT]	[NT]	LCS-1	120%
Surrogate o-Terphenyl	%		ORG-003	106	[NT]	[NT]	LCS-1	88%

QUALITY CONTROL vTRH(C6-C10)/MBTEXN in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			08/06/2016	[NT]	[NT]	LCS-1	08/06/2016
Date analysed	-			09/06/2016	[NT]	[NT]	LCS-1	09/06/2016
TRHC$_{6}$ - C$_{9}$	mg/kg	25	ORG-016	<25	[NT]	[NT]	LCS-1	105%
TRHC$_{6}$ - C$_{10}$	mg/kg	25	ORG-016	<25	[NT]	[NT]	LCS-1	105%
MTBE	mg/kg	0.5	ORG-016	<0.5	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.2	ORG-016	<0.2	[NT]	[NT]	LCS-1	104%
Toluene	mg/kg	0.5	ORG-016	<0.5	[NT]	[NT]	LCS-1	106%
Ethylbenzene	mg/kg	1	ORG-016	<1	[NT]	[NT]	LCS-1	103%
m+p-xylene	mg/kg	2	ORG-016	<2	[NT]	[NT]	LCS-1	106%
o-xylene	mg/kg	1	ORG-016	<1	[NT]	[NT]	LCS-1	108%
Naphthalene	mg/kg	1	ORG-016	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		ORG-016	105	[NT]	[NT]	LCS-1	96%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			08/06/2016	[NT]	[NT]	LCS-1	08/06/2016
Date analysed	-			09/06/2016	[NT]	[NT]	LCS-1	09/06/2016
Naphthalene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	90%
Acenaphthylene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	92%
Phenanthrene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	92%
Anthracene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	94%
Pyrene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	100%
Benzo(a)anthracene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	89%
Benzo(b,j+k) fluoranthene	mg/kg	0.2	ORG-012	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	ORG-012	<0.05	[NT]	[NT]	LCS-1	90%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
p-Terphenyl-D_{14}	%		ORG-012	104	[NT]	[NT]	LCS-1	100%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			08/06/2016	[NT]	[NT]	LCS-1	08/06/2016
Date analysed	-			09/06/2016	[NT]	[NT]	LCS-1	09/06/2016
Hexachlorobenzene (HCB)	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
a-BHC	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	92%
b-BHC	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	99%
Lindane (g-BHC)	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
d-BHC	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Heptachlor	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	89%
Aldrin	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	93%
Heptachlor Epoxide	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	94%
a-Chlordane	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
g-Chlordane	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
a-Endosulphan	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
p,p'-DDE	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	95%
Dieldrin	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	87%
Endrin	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	98%
p,p`-DDD	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	100%
b-Endosulphan	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Endrin Aldehyde	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	LCS-1	107%
p,p'-DDT	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Ketone	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
Methoxychlor	mg/kg	0.1	ORG-012	<0.1	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			08/06/2016	[NT]	[NT]	LCS-1	08/06/2016
Date analysed	-			09/06/2016	[NT]	[NT]	LCS-1	09/06/2016
Arochlor 1016	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1260	mg/kg	0.1	ORG-006	<0.1	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			09/06/2016	[NT]	[NT]	LCS-1	09/06/2016
Date analysed	-			09/06/2016	[NT]	[NT]	LCS-1	09/06/2016
Arsenic	mg/kg	2	METALS-020	<2	[NT]	[NT]	LCS-1	107%
Cadmium	mg/kg	0.4	METALS-020	<0.4	[NT]	[NT]	LCS-1	107%
Chromium	mg/kg	1	METALS-020	<1	[NT]	[NT]	LCS-1	109%
Copper	mg/kg	1	METALS-020	<1	[NT]	[NT]	LCS-1	111%
Lead	mg/kg	1	METALS-020	<1	[NT]	[NT]	LCS-1	105%
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	LCS-1	113%
Nickel	mg/kg	1	METALS-020	<1	[NT]	[NT]	LCS-1	109%
Zinc	mg/kg	1	METALS-020	<1	[NT]	[NT]	LCS-1	109%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			08/06/2016
Date analysed	-			09/06/2016
Moisture	%	0.1	INORG-008	<0.10

QUALITY CONTROL svTRH(C10-C36) in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	181575-1	08/06/2016
Date analysed	-	[NT]	[NT]	181575-1	08/06/2016
TRHC$_{10}$ - C$_{14}$	mg/kg	[NT]	[NT]	181575-1	116%
TRHC$_{15}$ - C$_{28}$	mg/kg	[NT]	[NT]	181575-1	128%
TRHC$_{29}$ - C$_{36}$	mg/kg	[NT]	[NT]	181575-1	120%
TRH>C$_{10}$ - C$_{16}$	mg/kg	[NT]	[NT]	181575-1	123%
TRH>C$_{16}$ - C$_{34}$	mg/kg	[NT]	[NT]	181575-1	130%
TRH>C$_{34}$ - C$_{40}$	mg/kg	[NT]	[NT]	181575-1	120%
Surrogate o-Terphenyl	%	[NT]	[NT]	181575-1	89%

QUALITY CONTROL vTRH(C6-C10)/MBTEXN in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	181575-1	08/06/2016
Date analysed	-	[NT]	[NT]	181575-1	09/06/2016
TRHC$_{6}$ - C$_{9}$	mg/kg	[NT]	[NT]	181575-1	106%
TRHC$_{6}$ - C$_{10}$	mg/kg	[NT]	[NT]	181575-1	106%
MTBE	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	[NT]	[NT]	181575-1	103%
Toluene	mg/kg	[NT]	[NT]	181575-1	107%
Ethylbenzene	mg/kg	[NT]	[NT]	181575-1	105%
m+p-xylene	mg/kg	[NT]	[NT]	181575-1	107%
o-xylene	mg/kg	[NT]	[NT]	181575-1	109%
Naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	181575-1	92%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	181575-1	08/06/2016
Date analysed	-	[NT]	[NT]	181575-1	09/06/2016
Naphthalene	mg/kg	[NT]	[NT]	181575-1	87%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	181575-1	93%
Phenanthrene	mg/kg	[NT]	[NT]	181575-1	92%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	181575-1	100%
Pyrene	mg/kg	[NT]	[NT]	181575-1	105%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	181575-1	90%
Benzo(b,j+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	181575-1	95%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
p-Terphenyl-D_{14}	%	[NT]	[NT]	181575-1	104%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	181575-1	08/06/2016
Date analysed	-	[NT]	[NT]	181575-1	09/06/2016
Hexachlorobenzene (HCB)	mg/kg	[NT]	[NT]	[NR]	[NR]
a-BHC	mg/kg	[NT]	[NT]	181575-1	92%
b-BHC	mg/kg	[NT]	[NT]	181575-1	125%
Lindane (g-BHC)	mg/kg	[NT]	[NT]	[NR]	[NR]
d-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Heptachlor	mg/kg	[NT]	[NT]	181575-1	91%
Aldrin	mg/kg	[NT]	[NT]	181575-1	97%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	181575-1	99%
a-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
g-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
a-Endosulphan	mg/kg	[NT]	[NT]	[NR]	[NR]
p,p'-DDE	mg/kg	[NT]	[NT]	181575-1	101%
Dieldrin	mg/kg	[NT]	[NT]	181575-1	92%
Endrin	mg/kg	[NT]	[NT]	181575-1	106%
p,p`-DDD	mg/kg	[NT]	[NT]	181575-1	109%
b-Endosulphan	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	181575-1	117%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
p,p'-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Ketone	mg/kg	[NT]	[NT]	[NR]	[NR]
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	181575-1	08/06/2016
Date analysed	-	[NT]	[NT]	181575-1	09/06/2016
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	181575-1	08/06/2016
Date analysed	-	[NT]	[NT]	181575-1	09/06/2016
Arsenic	mg/kg	[NT]	[NT]	181575-1	104%
Cadmium	mg/kg	[NT]	[NT]	181575-1	97%
Chromium	mg/kg	[NT]	[NT]	181575-1	105%
Copper	mg/kg	[NT]	[NT]	181575-1	102%
Lead	mg/kg	[NT]	[NT]	181575-1	94%
Mercury	mg/kg	[NT]	[NT]	181575-1	104%
Nickel	mg/kg	[NT]	[NT]	181575-1	89%
Zinc	mg/kg	[NT]	[NT]	181575-1	88%

Report Comments:

Asbestos Signatories:

Asbestos was analysed by Approved Identifier: Not applicable for this job
Airborne fibres were analysed by Approved Counter: Not applicable for this job

Definitions:

NT: Not tested NA: Test not required INS: Insufficient sample for this test PQL: Practical Quantitation Limit
<: Less than >: Greater than RPD: Relative Percent Difference LCS: Laboratory Control Sample
NS: Not Specified NEPM: National Environmental Protection Measure NR: Not Reported

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E29442K	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 4 of 4	Attention: K.Taylor
Attention: Aileen		

Location: Minto

Sampler: K.Taylor

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number (147823)	Depth (m)	Sample Container	PID	Sample Description	Combo 5a	BTEX	Asbestos	Combo 5
1/6/16	77	TP25	0-0.1	G A	0	Fill				
	78		0.1-0.3	G A		Fill				
	79		0.4-0.6	G A		Fill	X			
	80		0.65-0.85	G		Nat				
	81	TP26	0-0.05	G A		Fill				
	82		0.2-0.4	G A		Fill	X			
	83		0.55-0.75	G		Nat				
	84	TP27	0-0.15	G A		Fill	X			
	85		0.2-0.4	G		Nat				
	86	TP28	0-0.2	G A		Fill	X			
	87	TP29	0-0.2	G A		Fill	X			
	88	TP30	0-0.1	G A		Fill				
	89		0.1-0.3	G A		Fill				
	90		0.4-0.6	G		Nat				
	91	TP31	0-0.2	G A		Fill	X			
	92	TP32	0-0.2	G A		Fill	X			
31/5/16	93	TP33	0-0.2	G A		Fill	X			
	94		0.4-0.5	G		Nat				
	95	DUPKT1		G						X
	*	DUPKT2		G						X
	96	DUPKT3		G						X

mpl Laboratories ENVIROLAB GROUP

Job No.- 181575

Date Rec - 3-6

Time Rec - 1600

Rec By - MC

TAT Req - SAME 1 / 2 / 3 / STD

Temp - cool / ambient

Cooling - Ice / Ice pack / None

Security Seal - Yes / No

Remarks (comments/detection limits required): Please Send DUPKT2 to Melb enviolab.

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
KRT	2/6/16			2/6/16

Appendix D: Report Explanatory Notes

STANDARD SAMPLING PROCEDURE

These protocols specify the basic procedures to be used when sampling soils or groundwater for environmental site assessments undertaken by EIS.

The purpose of these protocols is to provide standard methods for: sampling, decontamination procedures for sampling equipment, sample preservation, sample storage and sample handling. Deviations from these procedures must be recorded.

Soil Sampling

- Prepare a borehole/test pit log or made a note of the sample description for stockpiles.
- Layout sampling equipment on clean plastic sheeting to prevent direct contact with ground surface. The work area should be at a distance from the drill rig/excavator such that the machine can operate in a safe manner.
- Ensure all sampling equipment has been decontaminated prior to use.
- Remove any surface debris from the immediate area of the sampling location.
- Collect samples and place in glass jar with a Teflon seal. This should be undertaken as quickly as possible to prevent the loss of any volatiles. If possible, fill the glass jars completely.
- Collect samples for asbestos analysis and place in a zip-lock plastic bag.
- Label the sampling containers with the EIS job number, sample location (eg. BH1), sampling depth interval and date. If more than one sample container is used, this should also be indicated (eg. 2 = Sample jar 1 of 2 jars).
- Photoionisation detector (PID) screening of volatile organic compounds (VOCs) should be undertaken on samples using the soil sample headspace method. Headspace measurements are taken following equilibration of the headspace gasses in partly filled zip-lock plastic bags. PID headspace data is recorded on the borehole/test pit log and the chain of custody forms.
- Record the lithology of the sample and sample depth on the borehole/test pit log generally in accordance with AS1726-1993[18].
- Store the sample in a sample container cooled with ice or chill packs. On completion of the sampling the sample container should be delivered to the lab immediately or stored in the refrigerator prior to delivery to the lab. All samples are preserved in accordance with the standards outlined in the report.
- Check for the presence of groundwater after completion of each borehole using an electronic dip metre or water whistle. Boreholes should be left open until the end of fieldwork. All groundwater levels in the boreholes should be rechecked on the completion of the fieldwork.
- Backfill the boreholes/test pits with the excavation cuttings or clean sand prior to leaving the site.

Decontamination Procedures for Soil Sampling Equipment

- All sampling equipment should be decontaminated between every sampling location. This excludes single use PVC tubing used for push tubes etc. Equipment and materials required for the decontamination include:
  - Phosphate free detergent (Decon 90);
  - Potable water;
  - Stiff brushes; and
  - Plastic sheets.

[18] Standards Australia, (1993), *Geotechnical Site Investigations.* (AS1726-1993)

- Ensure the decontamination materials are clean prior to proceeding with the decontamination.
- Fill both buckets with clean potable water and add phosphate free detergent to one bucket.
- In the bucket containing the detergent, scrub the sampling equipment until all the material attached to the equipment has been removed.
- Rinse sampling equipment in the bucket containing potable water.
- Place cleaned equipment on clean plastic sheets.

If all materials are not removed by this procedure, high-pressure water cleaning is recommended. If any equipment is not completely decontaminated by both these processes, then the equipment should not be used until it has been thoroughly cleaned.

Groundwater Sampling

Groundwater samples are more sensitive to contamination than soil samples and therefore adhesion to this protocol is particularly important to obtain reliable, reproducible results. The recommendations detailed in AS/NZS 5667.1:1998 are considered to form a minimum standard.

The basis of this protocol is to maintain the security of the borehole and obtain accurate and representative groundwater samples. The following procedure should be used for collection of groundwater samples from previously installed groundwater monitoring wells.

- After monitoring well installation, at least three bore volumes should be pumped from the monitoring wells (well development) to remove any water introduced during the drilling process and/or the water that is disturbed during installation of the monitoring well. This should be completed prior to purging and sampling.
- Groundwater monitoring wells should then be left to recharge for at least three days before purging and sampling. Prior to purging or sampling, the condition of each well should observed and any anomalies recorded on the field data sheets. The following information should be noted: the condition of the well, noting any signs of damage, tampering or complete destruction; the condition and operation of the well lock; the condition of the protective casing and the cement footing (raised or cracked); and, the presence of water between protective casing and well.
- Take the groundwater level from the collar of the piezometer/monitoring well using an electronic dip meter. The collar level should be taken (if required) during the site visit using a dumpy level and staff.
- Purging and sampling of piezometers/monitoring wells is done on the same site visit when using micro-purge (or other low flow) techniques.
- Layout and organize all equipment associated with groundwater sampling in a location where they will not interfere with the sampling procedure and will not pose a risk of contaminating samples. Equipment generally required includes:
  - Micropore filtration system or Stericup single-use filters (for heavy metals samples);
  - Filter paper for Micropore filtration system; Bucket with volume increments;
  - Sample containers: teflon bottles with 1 ml nitric acid, 75mL glass vials with 1 mL hydrochloric acid, 1 L amber glass bottles;
  - Bucket with volume increments;
  - Flow cell;
  - pH/EC/Eh/T meters;
  - Plastic drums used for transportation of purged water;
  - Esky and ice;
  - Nitrile gloves;
  - Distilled water (for cleaning);
  - Electronic dip meter;

- Low flow pump pack and associated tubing; and
- Groundwater sampling forms.

- If single-use stericup filtration is not used, clean the Micropore filtration system thoroughly with distilled water prior to use and between each sample. Filter paper should be changed between samples. 0.45um filter paper should be placed below the glass fibre filter paper in the filtration system.
- Ensure all non-disposable sampling equipment is decontaminated or that new disposable equipment is available prior to any work commencing at a new location. The procedure for decontamination of groundwater equipment is outlined at the end of this section.
- Disposable gloves should be used whenever samples are taken to protect the sampler and to assist in avoidance of contamination.
- Groundwater samples are obtained from the monitoring wells using low flow/micro-purge sampling equipment to reduce the disturbance of the water column and loss of volatiles.
- During pumping to purge the well, the pH, temperature, conductivity, dissolved oxygen, redox potential and groundwater levels are monitored (where possible) using calibrated field instruments to assess the development of steady state conditions. Steady state conditions are generally considered to have been achieved when the difference in the pH measurements was less than 0.2 units and the difference in conductivity was less than 10%.
- All measurements are recorded on specific data sheets.
- Once steady state conditions are considered to have been achieved, groundwater samples are obtained directly from the pump tubing and placed in appropriate glass bottles, BTEX vials or plastic bottles.
- All samples are preserved in accordance with water sampling requirements detailed in the NEPM 2013 and placed in an insulated container with ice. Groundwater samples are preserved by immediate storage in an insulated sample container with ice as outlined in the report text.
- Record the sample on the appropriate log in accordance with AS1726:1993. At the end of each water sampling complete a chain of custody form.

Decontamination Procedures for Groundwater Sampling Equipment

- All equipment associated with the groundwater sampling procedure (other than single-use items) should be decontaminated between every sampling location.
- The following equipment and materials are required for the decontamination procedure:
  - Phosphate free detergent;
  - Potable water;
  - Distilled water; and
  - Plastic Sheets or bulk bags (plastic bags).
- Fill one bucket with clean potable water and phosphate free detergent, and one bucket with distilled water.
- Flush potable water and detergent through pump head. Wash sampling equipment and pump head using brushes in the bucket containing detergent until all materials attached to the equipment are removed.
- Flush pump head with distilled water.
- Change water and detergent solution after each sampling location.
- Rinse sampling equipment in the bucket containing distilled water.
- Place cleaned equipment on clean plastic sheets.
- If all materials are not removed by this procedure that equipment should not be used until it has been thoroughly cleaned

QA/QC DEFINITIONS

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994[19]) methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (H. Keith 1991[20]).

Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection limit (MDL) for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations.

"The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit" Keith 1991.

Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD). Acceptable targets for precision in this report will be less than 50% RPD for concentrations greater than ten times the PQL, less than 75% RPD for concentrations between five and ten times the PQL and less than 100% RPD for concentrations that are less than five times the PQL.

Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured. The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes.

The proximity of an averaged result to the true value, where all random errors have been statistically removed. Accuracy is measured by percent recovery. Acceptable limits for accuracy generally lie between 70% to 130% recoveries. Certain laboratory methods may allow for values that lie outside these limits.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handing and analysis protocols and use of proper chain-of-custody and documentation procedures.

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[19] US EPA, (1994), *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* (US EPA SW-846)

[20] Keith., H, (1991), *Environmental Sampling and Analysis, A Practical Guide.*

Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms; Sample receipt form;
- All sample results reported; All blank data reported;
- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

Comparability

Comparability is the evaluation of the similarity of conditions (eg. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

Blanks

The purpose of laboratory and field blanks is to check for artifacts and interferences that may arise during sampling and analysis.

Matrix Spikes

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

Surrogate Spikes

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

Duplicates

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$