



Detailed Site Investigation

The Yulang Pub Corner of Olympic Boulevard and The Yulang, Sydney Olympic Park, NSW, 2127

FDC Construction & Fitout (NSW) Pty Ltd

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This report is limited to the scope defined herein. Sampling and chemical analysis of environmental media are based on representative samples, the intensity of those samples being in accordance with the usual levels of testing carried out for this type of investigation and appropriate for the objectives of this report. Due to the inherent variability in environmental media, DLA cannot warrant that the whole overall condition of the Site is identical or substantially similar to the representative samples.



ABBREVIATIONS

A list of the common abbreviations used throughout environmental reports is provided below:

ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
B(a)P	Benzo(a)Pyrene
BGS	Below Ground Surface
ВН	Borehole
BTEX	Benzene, Toluene, Ethyl Benzene, Xylene
CLM	Contaminated Land Management
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DA	Development Application
DLA	DLA Environmental Services
DP	Deposited Plan
DQI	Data Quality Indicator
DQO	Data Quality Objective
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
EPA	Environment Protection Authority (NSW)
ESL	Ecological Screening Level
HIL	Health-Based Investigation Level
HSL	Health Screening Level
LOR	Limit of Reporting
MW	Monitoring Well
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environmental and Heritage
OPP	Organophosphorus Pesticides
OH&S	Occupational Health and Safety
РАН	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PQL	Practical Quantification Limit
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance and Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAC	Site Acceptance Criteria
SAQP	Sampling Analysis and Quality Plan
SEPP	State Environmental Planning Policy
SWL	Standing Water Level
TCLP	Toxicity Characteristic Leaching Procedure
TRH	Total Recoverable Hydrocarbons
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WHS	Work Health Safety



EXECUTIVE SUMMARY

DLA Environmental Services (DLA) was engaged by FDC Construction & Fitout (NSW) Pty Ltd to conduct a Detailed Site Investigation (DSI) of the site at the Corner of Olympic Boulevard and The Yulang, Sydney Olympic Park, NSW, 2127. The Site is currently hardstand open space within Cathy Freeman Park and the it is intended to be redeveloped into a pub. The DSI Report provides detailed information on the characterisation and environmental status of the Site and assesses the effects of any potential identified contamination on public health and the environment.

The Site was formerly used for agriculture and as a car park and has more recently redeveloped for open space as part of works for the Sydney 2000 Olympics. Surrounding land use of the Site has historically been agricultural and commercial/industrial. A WorkCover NSW search indicated that Dangerous Goods Licenses have not been held for the Site. A search was conducted of all records pertaining to section 58 of the *Contaminated Land Management Act 1997* (NSW) and revealed that the Site or surrounding sites are not encumbered by any notices from the NSW EPA with regard to contaminated land.

The principal potential contamination sources are associated with the use of fill and the surrounding commercial/industrial land use. Potential Contaminants of Concern (PCOC) therefore include asbestos, hydrocarbons (in particular volatile and semi-volatile Total Recoverable Hydrocarbons (vTRH and sTRH) and Polyaromatic hydrocarbons (PAH)), Polychlorinated Biphenyls (PCB), Organochlorine (OC) and Organophosphate (OP) pesticides and heavy metals.

Seven soil bores were excavated across the Site on the 15th June 2017 to determine whether past or present land uses have contaminated Site soils. Groundwater was not investigated as DLA was informed that groundwater is unlikely to be encountered during future Site works. Should groundwater be encountered during future Site works, DLA recommends that a groundwater assessment be conducted for potential contamination.

The Site is sealed by approximately 0.1 m of hardstand and sand. Fill material was present across the Site and generally comprised of brown clayey sand or brown silty clay mixed with gravel and concrete. Minor amounts of foreign material such as glass, tile and plastic were observed in fill material. No ACM, odours or staining was identified in fill material during the assessment. Fill material was encountered from 0.1 m bgl to 3.0 m bgl.

Natural soils were comprised of orange and grey weathered shale and were encountered from 2.5 m bgl. Moisture/ wet sands were encountered at BH5 at 3.7 m bgl, however groundwater was only encountered in BH6 at 6.1 m bgl.



The Site Assessment Criteria were derived from NEPM (NEPC, 2013). The relevant thresholds were specific to the proposed commercial/industrial land use of the Site. Ten soil samples were analysed for identified PCOC. There were no concentrations of vTRH, TRH, BTEX, Naphthalene, PCB, OC or OP pesticides recorded above the Laboratory Limit of Reporting. Detections of BaP TEQ, Total PAHs and heavy metals were reported above the LOR, however all reported concentrations complied with the adopted Site Assessment Criteria.

As part of this investigation, DLA provided a preliminary Waste Classification of material to be disposed off-site. All material on-site was suitable for classification as General Solid Waste (GSW), non-putrescible. Analytical results also indicated that all fill material would potentially be suitable for classification as Excavated Natural Material (ENM). Additional analysis of soils for pH, electrical conductivity and foreign material is required to determine if material would be suitable for classification.

The DSI concludes that the Site is suitable for the intended land use consistent with NEPM (NEPC, 2013) Commercial/Industrial.



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1.0 INTRODUCTION

1.1 General

DLA Environmental Services (DLA) was engaged by FDC Construction & Fitout (NSW) Pty Ltd to conduct a Detailed Site Investigation (DSI) of the following area:

The Yulang Pub

Corner of Olympic Boulevard and The Yulang, Sydney Olympic Park, NSW, 2127 (the Site).

The Site is currently hardstand open space within Cathy Freeman Park and the Site is intended to be redeveloped into a pub. The DSI Report provides detailed information on the characterisation and environmental status of the Site and assesses the effects of any potential identified contamination on public health and the environment. Based on known land reclamation and land filling having occurred in the region, a DSI was conducted prior to a Preliminary Site Investigation (PSI) to assess potential contamination of Site soils.

1.2 Development Controls

The Site is located within Sydney Olympic Park and is managed by the Sydney Olympic Park Authority (SOPA). The following planning controls are relevant to the re-development: SEPP (State Significant Precincts) 2005 and the Draft Sydney Olympic Park Master Plan 2030 (2016 Review).

1.3 Objectives

The project objectives of this DSI are to identify potential sources of contamination and the contaminants of concern resulting from past and present site uses, evaluate the presence of contamination in the identified areas of concern and assess the suitability of the Site for its intended land use. In particular, this DSI provides conclusions regarding the suitability of the land for future land use consistent with *Commercial/Industrial* in the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) ('NEPM', NEPC, 2013).

1.4 Scope of Works

To achieve this objective, DLA carried out the following works:

- Provide a summary of the history and environmental setting of the Site;
- Providing an overview of the Site's past and current land uses and potential contamination issues;



- Systematic and judgmental soil sampling based on representative Site coverage and identified potential contamination issues;
- Laboratory testing of selected soil samples from six boreholes for a range of potential organic and inorganic contaminants;
- Interpretation of the results of laboratory testing in the context of the Site Assessment Criteria, field observations, local geology and hydrogeology and the history of the Site;
- Development and documentation of a Conceptual Site Model (CSM) based on the available information; and,
- Provide an assessment of Site contamination and discuss the suitability of the site for its intended land use including an outline of the requirements for further assessment, management or remediation works (if necessary).



2.0 SITE INFORMATION

2.1 Site Identification

The Site identification details are summarised in Table 2a.

Table 2a: Site Identification Summary

ITEMS	DETAILS
Site Name	The Yulang Pub
Address	Corner of Olympic Boulevard and The Yulang, Sydney Olympic Park, NSW, 212
Local Government Authority	City of Parramatta/SOPA
Lot and Deposited Plan	Lot 69 in DP1191648
Site Zoning	B4 Mixed Use
Current Use	Hardstand walkway
Proposed Use	Commercial/Industrial – Pub
Site Area (approx.)	Approx. 1,000 m ²
Locality Map	Refer to Figure 1 – Site Location and Figure 2 – Site Layout and Sampling Locations

2.2 Proposed Development

Based on the information provided, it is understood that that the existing open space situated in Cathy Freeman Park is intended to be redeveloped into a pub. The construction will consist of a two storey structure and a basement with a total area of 1,587m². This development scenario is consistent with the definition of 'Commercial/Industrial' provided in Schedule B7 of the NEPM (NEPC, 2013).

2.3 Boundaries and Surrounding Land Use

The Site is situated within an area dominated by open space and commercial/industrial land use. Boundary and surrounding landscape features of the Site are summarised in **Table 2b**.



DIRECTION	DETAILS
North	Open space and Spotless Stadium
East	Open space and Sydney Showground buildings
South	Dawn Fraser Avenue, Hotels and building infrastructure
West	Olympic Boulevard and ANZ Stadium

Table 2b: Boundaries and Surrounding Land Use

2.4 Site Geology and Soils

Review of the Geological Survey map of NSW Sydney 1:100,000 Geological Series Sheet 9130 (Edition 1) indicates that the Site is located along the boundary between filling over alluvial sediments and Ashfield Shales which comprises of black mudstones and grey shales with frequent sideritic clay ironstone bands. The Site is underlain by the Blacktown Landscape Group. This is characterised by gently undulating rises with local relief to 30m and slopes usually <5%. Broad rounded crests and ridges with gently inclined slopes. Soils comprise shallow to moderately deep red and brown podzolic soils on crests, upper slopes and well drained areas, and deep yellow podzolic soils and soloths on lower slopes and in areas of poor drainage. Limitations of the soils of the Blacktown landscape group include moderately reactive highly plastic subsoil, low soil fertility and poor soil drainage.

2.5 Site Topography

The Site is sealed by paving and bricks and is boarded by concrete steps/bleachers on the west and south boundaries of the Site. These steps are raised approximately 1-2 m above the base of the Site. The remainder of the Site is level and is approximately 17 m AHD. The parkland on the eastern border of the Site is the same level as the Site.

2.6 Acid Sulphate Soils

Review of the 1:25,000 Acid Sulphate Soil Risk Map (DLWC 1997) indicated that there are no known occurrences of acid sulphate soils in the area. There were no visual indications of acid sulphate soils observed.

2.7 Salinity and Agressivity of Soils

The Salinity Potential in Western Sydney map (DIPNR, 2002) indicates that the Site and the Sydney Olympic Park area in general are within a region of moderate salinity potential.

2.8 Hydrology and Hydrogeology

The entire Site is sealed and as such, rainfall is expected to flow away from the steps that boarder the Site into an underground stormwater collection system. Rainwater that falls in the centre of the Site is expected to flow east into the adjacent parkland.

A search of the Department of Natural Resources groundwater database was also performed to identify wells in the vicinity of the site. The search results identified nine registered groundwater monitoring wells located within 5km of the site, the information of which is presented in **Table 2c**.

WELL ID	DISTANCE FROM SITE (m)	PURPOSE	DEPTH (m)	STANDING WATER LEVEL (m)	SALINITY (μS/cm)
GW113381	300 m	Monitoring bore			
GW111341	300 m	Monitoring bore	8.00m		
GW111342	300 m	Monitoring bore	8.00m		
GW111343	350 m	Monitoring bore	8.00m		
GW111380	350 m	Monitoring bore	8.00m		
GW102562	1 km	Monitoring bore	4.00m	1.83 m	
GW102550	1 km	Monitoring bore	4.00m	1.80 m	
GW102555	1.2 km	Monitoring bore	4.00m	1.83 m	
GW102553	1.3 km	Monitoring bore	4.00m	1.83 m	

Table 2c: Regional Groundwater Summary Data

DLA has not been provided with information relating to groundwater depth at the Site, however observations during the investigation indicate groundwater is present approximately 4.0-5.0 m bgl.

3.0 SITE HISTORY

DLA has not been provided with previous environmental investigations conducted at the Site, however the Sydney Olympic Park region is known to have had a history of land reclamation, land filling and commercial/industrial land use.

3.1 Section 149 Certificate

Planning Certificates from City of Parramatta Council under Section 149 of the *Environmental Planning and Assessment Act, 1979* was obtained for the Site, stating:

- The Auburn Local Environmental Plan (2010) apply to this land;
- The land does not include or comprise critical habitat and is not located in a Conservation Area;
- No item of environmental heritage is situated on the land and the property is not listed on the State Heritage Register;
- No matters apply to this property under the *Contaminated Land Management Act*, 1997;
- The land is biodiversity certified land but not subject to a bio-banking agreement;
- The land has not been identified as bushfire prone land.

Refer to **Appendix C** – Section 149 Certificate.

3.2 Aerial Photographs

Aerial photographs from 1930 to 2017, available from the NSW Lands Department, SixMaps, Nearmaps and the Client, were reviewed by DLA with relevant observations being summarised in **Table 3a**.



Table 3a: Aerial Photograph Review

YEAR	DETAILS
1930	The Site appears to be a paddock and could be used for agricultural purposes. Agricultural land is located to the north, south and west and a large commercial/industrial site is located to the east. A quarry is present approximately 800 m north east of the Site.
1942	The Site appears to be a paddock that may be used for grazing. There has been no significant observable change to the Site since 1930.
1955	There has been no significant observable change to the Site or surrounding land use since 1942.
1970	The Site has been redeveloped into a car park and contains four small shade/bus stop style structures. The car park extends to the north and the commercial/industrial property to the east has been extended. West of the Site is a small grassed open space area and a railway line. Paddocks are still present south of the Site. The surrounding land use is a mix between commercial/industrial and agricultural.
1986	The Site remains a car park and surrounding land use is still a mix between commercial/industrial and agricultural.
1999	The Site and surrounding areas have been redeveloped in association with works for the Sydney 2000 Olympics. The Site now resembles its current state and is situated in what is now called 'Cathy Freeman Park". The railway and paddock areas have been replaced with a large paved area. A retaining wall, bleachers, stairs, hardstand and grass are now present on the Site.
2000	An amenities block has been established north west of the Site. The Site now contains paved hardstand and bitumen. Temporary site sheds associated with the Sydney 200 Olympics are present to the west of the Site.
2002	The temporary sheds have been removed and the Site is now an open space paved hardstand area. Parts of the bleachers on the southern boundary appear to have been removed or filled. A garden bed is now present in the centre of the Site.
2017	The garden bed has been removed and there are no other significant changes to the Site.

Refer to **Appendix A** – Aerial Photographs.

3.3 Historical Title Search

Title search results from 1910 to 2017 were reviewed by DLA with relevant observations summarised in **Table 3b**.



YEAR	SITE OWNER	LAND USE / OCCUPATION
1910 to 1929	The Minister for Public Works of the State of New South Wales	Open space
1929 to 1933	Metropolitan Meat Industry Board	Open space
1933 to 1951	The Metropolitan Meat Industry Commissioner	Open space
1951 to 1980	The Metropolitan Meat Industry Board	Car park
1980 to 1983	Homebush Abattoir Corporation	Car park
1983 to 1993	The Minister for Public Works	Car park
1993 to Date	Homebush Bay Development Corporation, then Olympic Co-Ordination Authority and now Sydney Olympic Park Authority	Open space/Cathy Freeman Park

Table 3b: Historical Title Search

Refer to **Appendix B** – Historical Title Search.

3.4 WorkCover Dangerous Goods Search

A WorkCover NSW search indicated that Dangerous Goods Licenses have not been held for the Site.

Refer to **Appendix D** – Dangerous Goods Search.

3.5 Contaminated Land Record Search

A search was conducted of records pertaining to section 58 of the *Contaminated Land Management Act 1997* (NSW) and revealed that the Site is not encumbered by any notices from the NSW EPA with regard to contaminated land. Eight sites within Sydney Olympic Park are encumbered by current notices for containing significantly contaminated land. These sites are landfills with ongoing management required by a Maintenance of Remediation Notice 28040 from the NSW EPA. The closest of these Sites is the Aquatic Centre Carpark Landfill located approximately 500 m from the Site. The landfills are currently being monitored for potential migration of contamination off-site. The notice states that EPA is generally satisfied with the monitoring results, which suggest that the waste containment areas pose no unacceptable impact on their surrounding environment.

4.0 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) is a representation of an environmental system and the processes that determine the transport of contaminants from sources through environmental media to environmental receptors.

4.1 Contaminants of Potential Concern

The principal potential contamination sources are associated with the use of fill and the surrounding commercial/industrial land use. Potential Contaminants of Concern (PCOC) therefore include asbestos, hydrocarbons (in particular volatile and semi-volatile Total Recoverable Hydrocarbons (vTRH and sTRH) and Polyaromatic hydrocarbons (PAH)), Polychlorinated Biphenyls (PCB), Organochlorine (OC) and Organophosphate (OP) pesticides and heavy metals.

4.2 Transport Mechanisms and Exposure Pathways

The relevant transport mechanisms and exposure pathways are summarised in Table 4.

TRANSPORT				EXPOSURE PATHWAYS				
MECHANISMS	DESCRIPTION	Α	В	С	D	E	F	
Windblown Dust Migration	As the site is sealed, the potential for windblown dust migration of contamination is considered to be low.	Y	Y	N	N	N	N	
Surface Water Migration	As the site is sealed, the potential for surface water migration of contaminants is considered to be low.	N	N	Y	N	N	N	
Soil Migration	The potential for migration of contamination via surface water movement and infiltration of water and subsequent migration through the soil profile was considered generally to be moderate given the presence of fill material on-site.	Y	Y	Y	Y	N	N	
Groundwater Migration	Groundwater seepage from any affected filling on site has the potential to occur.	Y	Y	Y	Y	N	N	
Vapour Generation	The vapour generation potential associated with volatile and semi-volatile PCOC (TPH, BTEX, and VOCs) was identified as a potential migration pathway. However, vapour generation would be dependent on the presence of a source of vapour generation on or in the vicinity of the Site.		N	N	N	N	N	

Table 4: Transport Mechanisms and Exposure Pathways

A: inhalation of PCOC vapours migrating upwards from fill material of unknown origins or impacted surface soils resulting from potential historical activities.

B: potential dermal and oral contact with impacted soils during Site works or future site occupants

C: potential dermal and oral contact with shallow groundwater.

D: potential contaminant uptake by vegetation established in the landscaped areas of the site.

E: direct ingestion of soil, particularly by young children playing on the ground surface in unsealed areas of the Site



4.3 Sensitive Receptors

The potential sensitive receptors of environmental impacts present at the Site include:

- Present and future workers and users of the Site who may potentially be exposed to PCOCs through direct contact with impacted soils and/or inhalation of dusts/vapours associated with impacted soils;
- People who will inhabit or use the site facilities or come into close proximity to the site; and
- Maintenance workers conducting activities at the site, who may potentially be exposed to PCOCs through direct contact with impacted soils present in excavations/boreholes and/or inhalation of dusts associated with impacted soils.



5.0 ENVIRONMENTAL ASSESSMENT METHODOLOGY

5.1 Data Quality Objectives

The NEPM (NEPC, 2013) and Australian Standard (AS) 4482.1-2005 recommend that data quality objectives (DQOs) be implemented during the assessment of potentially contaminated sites. The DQO process described in AS 4482.1-2005 Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil Part 1: Non-Volatile and Semi-Volatile Compounds outlines seven distinct steps to outline the project goals, decisions, constraints and an assessment of the project uncertainties and how to address these when they arise. The DQOs have been summarised in **Table 5a**.

Table 5a: Data Quality Objectives

1	State the Problem	The Site has been historically used as open space and as a car park and has likely been filled with material of an unknown origin. The DSI needs to address the question of whether the Site is suitable for the proposed land use of Commercial/Industrial as defined by the NEPM (NEPC, 2013).		
2	the Decisions	The decisions to be made on the contamination and the new environmental data required includes considering relevant site contamination criteria for soils. A proposed use of the 95% Upper Confidence Limit (UCL) on the mean concentrations for all chemicals of potential concern must be less than the site criteria identified for Commercial/Industrial land use suitability. Decisions include:		
	ldentify	 Do contaminant concentrations comply with the stated Assessment Criteria? Have the previous land uses affected the environmental quality of the land? Do residual soils or groundwater pose an unacceptable risk to human health or the environment? 		
		The primary inputs in assessing the presence of contamination in soil are as follows:		
£	ldentify Inputs to Decisions	 Historical information obtained from previous environmental reports, including areas of potential and known contamination; Investigation objectives; Existing and proposed site uses and features; Field investigation techniques to assess contamination as per DLA's standard field procedures; Laboratory analytical data on analysed samples including interpretation and statistical analysis of laboratory data; Assessment of risk based on the nature and extent of contamination, current and future potential receptors and the likelihood of exposure to unacceptable 		
		and future potential receptors and the likelihood of exposure to unacceptabl levels of contamination both on and off the Site.		



4	Study Boundaries	 Spatial Boundaries –defined by the boundary of the subject Site identified in Figure 2 – Site Layout and Sample Locations. Temporal Boundaries – as no data from previous environmental reports has been provided, the temporal boundary for this assessment limited to 2017.
ß	Develop Decision Rule	 The site will be considered suitable for its intended land use if concentrations in soils comply with the investigation and screening levels of the Site Assessment Criteria, as determined by the following decision rules being applied to the data: The 95% Upper Confidence Limit (UCL) of the arithmetic mean for each Contaminant of Concern must comply with the respective screening level; The individual contaminant concentration should not exceed the respective screening level by more than 250%, and; The standard deviation of individual contaminants should not exceed 50% of the respective screening level.
Q	Specify Limits on Decision Errors	Field and laboratory quality controls are implemented to avoid error and to ensure the action levels exceed the measurement detection limits. The performance of decision making inputs will be enhanced through the application of Data Quality Indicators (DQI), defined in the following table. A site under assessment is assumed to be contaminated until statistically proven otherwise (eg: H ₀ = Analyte 95% UCL exceeds the assessment Criteria), therefore two types of error are possible; Type 1 error (α or false negative), where the site is assessed to be uncontaminated when it is actually is, and Type 2 error (β or false positive), when the Site is assessed to be contaminated though is actually not. The more severe consequence is with Type 1 errors (α) since the risk of jeopardising human or environmental health outweighs the consequences of additional remediation costs. Therefore, to achieve appropriate confidence in the data, probabilities are set at 5% for Type 1 error, whilst Type 2 errors are set at a 20% probability limit.
7	Optimise Design for Obtaining Data	Appropriate QA/QC procedures have been adopted to ensure the quality of the data obtained in the current assessment. The most resource-effective sampling and analysis plan for general data has been designed to satisfy the DQOs, refer to Table 5b .



5.1.1 Data Quality Indicators

Table 5b: Data Quality Indicators

DATA PRECISION AND ACCURACY			
Relative Percentage Difference (RPD)	 >10 x LOR: 30% inorganics; 50% organics (Field) <10 x LOR: Assessed on individual basis (Field) >5 x LOR: 50% (laboratory) <5 x LOR: No Limit (laboratory) 		
Laboratory Performance	Based on acceptance criteria of laboratory as specified on certificate of analysis, includes: blank samples, matrix spikes, control samples, and surrogate spike samples. Use of analytical laboratories with adequately trained and experienced testing staff experienced in the analyses undertaken, with appropriate NATA certification.		
Fieldwork Performance	Use of trained and qualified field staff; same sampler(s) used for all recoveries. Appropriate sampling methods used, minimising the opportunity for cross-contamination.		
DATA REPRESENTATIVENESS			
Sample Coverage	Representative coverage of potential contaminants, based on site history, site activities and site features.		
Sample and Analysis Selection	Representativeness of all PCOC.		
Trip Blanks	No detection above LOR.		
Trip Spikes	Recoverable concentrations of volatiles between 60 – 140%.		
Laboratory Selection	Use of NATA registered laboratories with internal quality control and quality assurance methods that comply with the NEPM (NEPC, 2013).		
DOCUMENTATION COMPLETENE	SS		
DOCUMENTATION COMPLETENE Documentation Review	Review of acquired documented information pertaining to site history		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody. Analysis for all contaminants of concern.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody. Analysis for all contaminants of concern. Field duplicate sample numbers complying with NEPM (NEPC, 2013).		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody. Analysis for all contaminants of concern. Field duplicate sample numbers complying with NEPM (NEPC, 2013). Trip spike samples prepared and sent with field samples regularly.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS COMPARABILITY	Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody. Analysis for all contaminants of concern. Field duplicate sample numbers complying with NEPM (NEPC, 2013). Trip spike samples prepared and sent with field samples regularly.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS COMPARABILITY	 Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody. Analysis for all contaminants of concern. Field duplicate sample numbers complying with NEPM (NEPC, 2013). Trip spike samples prepared and sent with field samples regularly. Use of consistent test methods for each sample. 		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS COMPARABILITY	 Review of acquired documented information pertaining to site history Preparation of borehole logs and sample location plan. Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody. Analysis for all contaminants of concern. Field duplicate sample numbers complying with NEPM (NEPC, 2013). Trip spike samples prepared and sent with field samples regularly. Use of consistent test methods for each sample. Using appropriate techniques for sample recovery. 		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS COMPARABILITY Fieldwork Performance	SSReview of acquired documented information pertaining to site historyPreparation of borehole logs and sample location plan.Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody.Analysis for all contaminants of concern.Field duplicate sample numbers complying with NEPM (NEPC, 2013).Trip spike samples prepared and sent with field samples regularly.Use of consistent test methods for each sample.Using appropriate techniques for sample recovery.Using experienced sampler.		
DOCUMENTATION COMPLETENE Documentation Review Fieldwork Observations Chain of Custody Records DATA COMPLETENESS COMPARABILITY Fieldwork Performance	SSReview of acquired documented information pertaining to site historyPreparation of borehole logs and sample location plan.Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody.Analysis for all contaminants of concern.Field duplicate sample numbers complying with NEPM (NEPC, 2013).Trip spike samples prepared and sent with field samples regularly.Use of consistent test methods for each sample.Using appropriate techniques for sample recovery.Using experienced sampler.Test methods comparable between primary and secondary laboratory.		



5.2 Field Investigation and Sampling

5.2.1 Soil Sampling Rationale

A stratified and judgmental sampling pattern was adopted for PCOC identified in **Section 4.0.** A total of 10 samples were collected and analysed from six boreholes. Sample locations were restricted to areas where underground services were not located and were based on assessing representative material throughout the Site. Boreholes were also located within the proposed basement area to determine whether groundwater would be encountered during future Site works and to characterise fill material that will require off-site disposal.

Groundwater was not assessed in this investigation as groundwater is unlikely to be encountered during proposed Site works. If groundwater is encountered during future Site works, an additional groundwater assessment should be conducted at the Site.

The sampling and analytical regime adopted in the current assessment complies with the minimum sampling density specified in the *Sampling Design Guidelines* (NSW EPA, 1995), for the characterisation of the Site. Given the moderate risk of contamination on the Site (based on historical evidence), the sampling density of six is considered to be adequate to assess contamination potential on a site of approximately 1000 m².

Refer to Figure 2 – Site Layout and Sampling Locations.

5.2.2 Soil Sampling Strategy

Each proposed borehole location was inspected and checked for underground utilities and services by DLA staff and subcontractor using a cable locater and available Site diagrams obtained from the Sydney Olympic Park Authority and Dial Before You Dig (DBYD).

Seven boreholes were excavated using a truck mounted drill rig on the 15th June 2017. Samples were collected from six boreholes, a seventh borehole was excavated and material types were logged, however no samples were collected. This borehole was excavated to assist in delineating the extent of concrete encountered at depth at BH1 and BH2. Boreholes were excavated using a solid flight auger to depths ranging from 0.4 m to 8.0 m bgl. Soil samples were collected from representative or different strata layers. The description of the soil profile at each location was noted in borelogs.

Refer to **Appendix E** - Borelogs.



Each soil sample was placed into a new 250mL glass jar until full and sealed with a screw cap lid incorporating a Teflon insert. The sealed sample jar was then placed immediately into an ice-chilled cooler. Job number; sample identification number; sampler's initials and date of sampling were recorded on sample labels affixed to the sample containers. The samples were transported under standard DLA chain-of-custody protocols to NATA accredited laboratories. Soil samples selected for laboratory analysis were transported in ice filled coolers under chain of custody conditions to the laboratory. Retained samples were kept in refrigerated storage.

5.3 Laboratory Analysis

5.3.1 Soil Analysis

Soil samples were analysed for listed chemicals based on representativeness of potential contamination across the Site and to allow confident assessment of potential contamination. Samples were analysed for the following parameters:

Table 5c	: Soil	Analy	/sis

Sample Name	DEPTH (m)	DATE SAMPLED	ANALYSIS SUITE
BH1-0.3	0.3	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals, OCP, OPP, PCB
BH2-0.5	0.5	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals
BH3-0.7	0.7	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals, OCP, OPP, PCB
BH3-1.5	1.5	15.06.2017	Asbestos
BH3-2.2	2.2	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals
BH4-0.8	0.8	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals, OCP, OPP, PCB
BH4-3.0	3	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals
BH5-3.0	3	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals
BH6-0.5	0.5	15.06.2017	Asbestos, vTRH/BTEX, TRH, PAH, Heavy Metals, OCP, OPP, PCB
BH6-1.5	1.5	15.06.2017	Asbestos

vTRH: Volatile Total Recoverable Hydrocarbons

BTEX: Benzene, Toluene, Ethyl-Benzene, Xylenes

TRH: Total Recoverable Hydrocarbons

PAH: Polycyclic Aromatic Hydrocarbons

Heavy Metals: Arsenic (As), Chromium (Cr), Cadmium (Cd), Copper, (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Zinc (Zn)

OCP: Organochlorine Pesticides

OPP: Organophosphorus Pesticides **PCB:** Polychlorinated Biphenyls



6.0 QUALITY ASSURANCE AND QUALITY CONTROL

6.1 Field QA/QC

6.1.1 Sampling Team

Soil sampling was undertaken by Nathan Nagle, an experienced environmental consultant from DLA Environmental.

6.1.2 Field Procedures

The following field procedures were implemented as part of field QAQC:

- Sample Containers: soil samples collected during the investigation were placed immediately into laboratory prepared glass jars with Teflon lid inserts. Standard identification labels were adhered to each individual container and labelled according to depth, date, sampling team and media collected;
- **Decontamination:** all equipment used in the sampling program which includes a hand auger, spades and mixing bowl was decontaminated prior to use and between samples to prevent cross contamination. Decontamination of equipment involved:
 - Cleaning equipment in potable water to remove gross contamination;
 - Cleaning in a solution of Decon 90; and,
 - Rinsing in clean demineralised water then wiping with clean lint free cloths.
- Chain of Custody: samples were recorded on a chain of custody form. The chain of custody form accompanied samples upon dispatch to the NATA registered laboratories for analysis. Copies of the chain of custody forms, signed by laboratory, that acknowledged sample receipt date and time, samples received in good condition and properly chilled and documentation received in proper order, are provided in Appendix B Nata Certified Analytical Results;

6.1.3 Field QA/QC Duplicate Analysis

Field duplicate samples for soil were prepared in the field through the following process:

- A larger than normal quantity of soil is recovered from the sample location selected for duplication;
- The sample is placed in a decontaminated stainless bowl and mixed as thoroughly as practicable before being divided into equal parts;
- Two portions of the sub-sample are immediately transferred, one for an intra-laboratory duplicate and another as a sample; and,

• Samples are placed into a labelled, laboratory supplied 250ml glass jar and sealed with an airtight, Teflon screw top lid. The fully filled jars are labelled as the sample and duplicate and immediately placed in a chilled esky.

Duplicate samples were prepared on the basis of sample numbers recovered during the field work. The duplicate sample frequency was computed using the total number of samples analysed as part of this assessment. The duplicate sample frequencies are shown below:

	10 Samples	2 intra-laboratory duplicates	20%
SOIL SAWIPLES	to samples	1 inter-laboratory duplicates	10%

The intra-laboratory duplicate rate and the inter-laboratory duplicate rates were greater than the 10% and 5% required by the Field Quality Plan. The QC sampling frequencies were therefore above the nominated rate.

Comparisons were made of the laboratory test results for the duplicate samples with the original samples and the Relative Percentage Difference (RPD) calculated as difference/average in order to assess the accuracy of the sampling and laboratory test procedures. The comparisons between the duplicates and original samples indicate acceptable RPDs when they comply with criteria which are commonly set at:

- Less than 30% for inorganics and 50% for organics;
- Less than five times the Laboratory LOR; and,
- The difference between concentrations is less than 5% of the relevant HIL concentration.

Two intra laboratory duplicate pairs exceeded the DQO of 30% for heavy metal concentrations; BH4-3.0 and BH4-3.0a for Nickel, BH5-3 and BH5-3a for Zinc and BH6-3.0 and BH6-3.0a for Copper and Nickel. Despite these exceedances, the differences in concentrations for BH4-3 and BH4-3a were less than five times the LOR and the differences in concentrations for BH5-3 and BH5-3a and BH6-3.0 and BH6-3.0a were less than 5% of the relevant HIL concentration.

Two intra laboratory duplicates exceeded the DQO of 50% for organic concentrations; BH4-3 and BH4-3a for Total PAHs and BH6-0.5 and BH6-0.5a for BaP TEQ and Total PAHs. Despite these exceedances, the differences in concentrations were less than 5% of the relevant HIL concentration.



6.2 Laboratory QA/QC

6.2.1 Selected Laboratory

Envirolab Services was used for primary and intra-laboratory duplicate chemical samples and SGS Australia was used for inter-laboratory duplicate chemical samples. Australian Safer Environment & Technology was used for all asbestos samples. The analytical methods and procedures used by all laboratories are NATA certified and meet requirements of NEPM (NEPC, 2013).

6.2.2 Laboratory Control Measures

All samples were received at the laboratory in good order, with the correct documentation and were properly chilled and all samples were analysed within the recommended holding times. Summary of the laboratory quality control results and a full QA/QC checklist is included in **Appendix F** – Nata Certified Laboratory Results.

6.3 QA/QC Assessment

Based on the QA/QC results, DLA considers the field measurement data and laboratory analytical results obtained are valid and meet the data quality objectives set for this DSI.



7.0 ASSESSMENT CRITERIA

The Site Assessment Criteria have been derived from NEPM (NEPC, 2013). The relevant thresholds are specific to the proposed development and take into account the anticipated exposure pathways as detailed in the CSM and proposed development details. The Site Assessment Criteria are not clean up criteria, but are indicative of a level of contamination above which there is a potentially unacceptable risk which may require further assessment, management or remediation.

7.1 Health Investigation Levels

The Health Investigation Levels (HILs) are scientifically based, generic assessment criteria designed to be used in the first stage (Tier 1) of an assessment of potential risks to human health from chronic exposure to contaminants. They are intentionally conservative and are based on a reasonable worst case scenario for four generic land use scenarios. Considering the proposed land use, HIL D - Commercial/Industrial has been used for this investigation, refer to **Table 7a**.



ANALYTES	HIL-D
Heavy Metals	
Arsenic	3,000
Cadmium	900
Chromium	3,600
Copper	240,000
Lead	1,500
Mercury	730
Nickel	6,000
Zinc	400,000
РАН	
BaP TEQ	40
Total PAHs	4,000
РСВ	
РСВ	7
Pesticides	
DDT+DDE+DDD	3,600
Aldrin and Dieldrin	45
Chlordane	530
Endosulfan	2,000
Endrin	100
Heptachlor	50
НСВ	80
Methoxychlor	2,500
Mirex	100
Toxaphene	160
Asbestos	
Bonded ACM	0.05% w/w
Friable Asbestos/Asbestos Fines	0.001% w/w
Surface Asbestos (0.1m)	No Visible

Table 7a: Health Investigation Levels for Soils – Commercial/Industrial

Health Investigation Levels soured from NEPM (NEPC, 2013) Table 1A(1)

Asbestos Health Screening Levels sourced from NEPM (NEPC, 2013) Table 7.

BaP (TEQ): Benzo(a)pyrene Toxic Equivalence Quotient. Toxic Equivalence Quotient (TEQ) expresses an aggregate measure of toxicity based on a number of contributing PAH compounds.

7.2 Health Screening Levels

Health Screening Levels (HSLs) are used to assess selected petroleum compounds and fractions to assess the risk to human health via inhalation and direct contact with affected soils. Based on the land use and material type encountered at the Site, HIL D – Commercial/Industrial for 'Clay' material has been adopted for this investigation, refer to **Table 7b**.



ANALYTES	HSL-D (Clay) 0-1.0m	HSL-D (Clay) 1.0 to <2.0m	HSL-D (Clay) 2.0 to <4.0m	Direct Contact HSL-D
Benzene	4	6	9	430
Toluene	NL	NL	NL	99,000
Ethylbenzene	NL	NL	NL	27,000
Xylenes	NL	NL	NL	81,000
Naphthalene	4	NL	NL	11,000
F1: C ₆ -C ₁₀	310	480	NL	26,000
F2: C10-C16	NL	NL	NL	20,000
F3: C16-C34	NA	NA	NA	27,000
F4: C ₃₄ -C ₄₀	NA	NA	NA	38,000

Table 7b: Health Screening Levels for Soils (Clay) – Commercial/Industrial

NL = Not Limiting (i.e. the soil vapour concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario).

NA = Not Applicable (i.e. NEPM (NEPC, 2013) does not provide HSLs for the F3 and F4 hydrocarbon fractions)..

Vapour Intrusion Criteria sourced from NEPM (NEPC, 2013) *Table 1A(3) – Soil HSLs for vapour intrusion*. Direct Contact Criteria sourced from Friebel and Nadebaum 2011, Health Screening Levels for petroleum Hydrocarbons in Soil and Groundwater, Part 1: Technical Development Document, *Table A4 – Soil Health Screening Levels for Direct Contact*.

7.3 Management Limits

In addition to appropriate consideration and application of the HSLs, there are considerations which reflect the nature and properties of petroleum hydrocarbons, including:

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

Management limits to avoid or minimise these potential effects have been adopted in NEPM (NEPC, 2013) as interim Tier 1 guidance. The adopted management limits are outlined in **Table 7c**.



Table 7c: Management Limits for Soils (Fine)

ANALYTES	ML (Fine) Commercial / Industrial
Benzene	
Toluene	
Ethylbenzene	
Xylenes	
Benzo(a)Pyrene	
F1: C ₆ -C ₁₀	800
F2: C10-C16	1,000
F3: C ₁₆ -C ₃₄	3,500
F4: C ₃₄ -C ₄₀	10,000

Management Limits soured from NEPM (NEPC, 2013) Table 1B(7)

7.4 Ecological Screening Levels

Ecological screening levels (ESLs) have been developed for selected petroleum hydrocarbon compounds and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil, refer to **Table 7d**.

Table 7d: Ecological Screening Levels (Fine)

ANALYTES	ESL (Fine) Commercial / Industrial
Benzene	95
Toluene	135
Ethylbenzene	185
Xylenes	95
Benzo(a)Pyrene	1.4
F1: C ₆ -C ₁₀	215
F2: C ₁₀ -C ₁₆	170
F3: C ₁₆ -C ₃₄	2,500
F4: C ₃₄ -C ₄₀	6,600

Ecological Screening Levels soured from NEPM (NEPC, 2013) Table 1B(6)



8.0 RESULTS

8.1 Field Observations

The Site was sealed by approximately 0.1 m of paved hardstand underlaid by a shallow layer of sand beddubg. A concrete staircase and bleachers were located along the eastern and southern boundary of the Site. Several trees we located in the eastern portion of the Site.

Underlying the hardstand and sand was fill material that generally consisted of brown clayey sand or brown silty clay mixed with gravel. Minor amounts of inert foreign material such as concrete, glass, tile and plastic were observed in fill material. No asbestos containing material (ACM), odours or staining was identified in fill material during the assessment. Fill material varied in depth and was encountered from 0.1 m bgl to 3.0 m bgl.

Natural soils were comprised of orange and grey weathered shale which was encountered from 2.5 m bgl. Moist and wet sands were encountered at BH5 at 3.7 m bgl, however groundwater was only encountered in BH6 at 6.1 m bgl.

BH1 and BH2 were terminated at 0.3 m and 0.9 m respectively, due to refusal of the drill. This is possibly due to a continuation of the concrete staircase on the southern boundary of the Site. Historical photographs indicate that the staircase was partially covered by the current hardstand during recent redevelopment works. BH7 was drilled to investigate if the concrete encountered in BH1 and BH2 extended to the location of BH7. Concrete was not encountered, indicating the staircase does not continue to extend throughout the Site. This indicates that additional fill material was placed between the time of the construction of the original staircase to the most recent redevelopment works.

Soils underlying the staircase (south boundary) and retaining wall (west boundary) could not be investigated due to access restrictions. Despite not being able to access these soils, it is expected that the material would be comparable to other fill material encountered throughout the Site.

8.2 Soil Analytical Results

Laboratory results of soil analyses are compared with the Assessment Criteria in **Appendix G** – Data Summary Table. The laboratory analytical reports of soil samples are provided in **Appendix B** – Nata Certified Analytical Results.



8.2.1 Monocyclic Aromatic Hydrocarbons, Volatile Total Recoverable Hydrocarbons and Semi Volatile Total Recoverable Hydrocarbons

Eight samples collected were analysed for Volatile Total Recoverable Hydrocarbons (vTRH) and Benzene, Toluene, Ethyl benzene, Xylene and Naphthalene (BTEX). There were no concentrations of vTRH, BTEX or Naphthalene recorded above the Laboratory Limit of Reporting (LOR). Eight samples were also analysed for semi-volatile Total Recoverable Hydrocarbon (TRH) compounds. There were no concentrations of TRH recorded above the LOR.

8.2.2 Polycyclic Aromatic Hydrocarbons

Eight samples were analysed for Polycyclic Aromatic Hydrocarbons (PAH) compounds. There were detections of BaP, BaP TEQ and Total PAHs above the LOR. All concentrations of PAH in the samples were within the adopted Site Assessment Criteria, refer to **Table 8a**.

SAMPLE	DATE	DEPTH (m)	BaP	BaP TEQ	TOTAL PAH	
BH1	15-Jun-17	0.3	0.2	<0.5	2.7	
BH2	15-Jun-17	0.5	0.2	<0.5	2.7	
BH3	15-Jun-17	0.7	0.1	<0.5	1.1	
BH3	15-Jun-17	2.2	<0.05	<0.5	<0.05	
BH4	15-Jun-17	0.8	0.3	<0.5	3.4	
BH4	15-Jun-17	3	0.05	<0.5	0.3	
BH5	15-Jun-17	3	0.09	<0.5	0.4	
BH6	15-Jun-17	0.5	0.4	0.5	4	
	CRITERIA (mg/kg	g)	ESL : 1.4	HIL: 40	4,000	

Table 8a: PAH Results (mg/kg)

8.2.3 Pesticides and Polychlorinated Biphenyls

Four samples (BH1-0.3m, BH3-0.7m, BH4-0.8m and BH6-0.5m) were analysed for Organochlorine (OC), Organophosphate (OP) pesticides and Polychlorinated Biphenyls (PCBs). There were no concentrations of OC or OP pesticides or PCBs recorded above the Laboratory LOR.

8.2.4 Heavy Metals

Eight samples were analysed for eight heavy metals. Detections were observed for all heavy metals with the exception of Cadmium and Mercury. All samples reported concentrations within the adopted Site Assessment Criteria, refer to **Table 8b**.

SAMPLE	DATE	DEPTH (m)	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
BH1	15-Jun-17	0.3	7	<0.4	15	18	27	<0.1	7	32
BH2	15-Jun-17	0.5	5	<0.4	12	27	25	<0.1	8	30
BH3	15-Jun-17	0.7	5	<0.4	13	24	26	<0.1	10	39
BH3	15-Jun-17	2.2	13	<0.4	29	26	27	<0.1	4	12
BH4	15-Jun-17	0.8	4	<0.4	13	28	26	<0.1	15	54
BH4	15-Jun-17	3.0	4	<0.4	11	35	17	<0.1	10	32
BH6	15-Jun-17	0.5	9	<0.4	17	31	25	<0.1	10	32
CRITERIA			3,000	900	3,600	240,000	1,500	730	6,000	400,000

Table 8b: Heavy Metal Results (mg/kg)

8.2.5 Asbestos

Analysis of asbestos in soils was undertaken in all samples. No samples reported the presence of asbestos fines/fibrous asbestos (AF/FA). No visible fragments of asbestos were observed during the investigation.



9.0 **DISCUSSION**

The Site is situated in an area that has undergone significant redevelopment. The Site has historically been used for agricultural purposes and as a car park. A commercial/industrial property was formerly located east of the Site and a railway line to the west. More recently the Site and surrounding areas have been redeveloped into open space for the Sydney 2000 Olympics. It is now proposed that the Site be redeveloped into a multi levelled pub with a basement.

The desktop review conducted by DLA indicates that the Site has been filled with material of an unknown origin. Seven soil bores were excavated across the Site on the 15th June 2017 to determine whether past or present land uses have contaminated Site soils. Groundwater was not investigated as DLA was informed that groundwater is unlikely to be encountered during future Site works. Should groundwater be encountered during future Site works, DLA recommends that a groundwater assessment be conducted for potential contamination.

The Site is sealed by approximately 0.1 m of hardstand and sand. Fill material was present across the Site and generally comprised of brown clayey sand or brown silty clay mixed with gravel. Minor amounts of inert foreign material such as glass, tile and plastic ws observed in fill material. No ACM, odours or staining was identified in fill material during the assessment. Fill material was encountered from 0.1 m bgl to 3.0 m bgl.

Natural soils were comprised of orange and grey weathered shale and were encountered from 2.5 m bgl. Moisture/ wet sands were encountered at BH5 at 3.7 m bgl, however groundwater was only encountered in BH6 at 6.1 m bgl.

The bleachers along the southern boundary of the Site likely extend north underneath the hardstand as BH1 and BH2 were terminated at 0.3 m and 0.9 m respectively, due to refusal of the drill from hitting concrete. Historical photographs also indicate that the bleachers were partially covered by the current hardstand at the Site during recent redevelopment works.

BH7 was drilled to delineate the extent of the lateral extent of the underground bleachers. Concrete was not encountered in BH7, indicating that the bleachers end between BH7 and BH1 and BH2. Soils underlying the bleachers could not be investigated, however it is expected that the material would be comparable to other fill material encountered throughout the Site. During future Site works, it is recommended that additional investigation of material underlying the bleachers be undertaken if the material is not consistent with material described in this DSI or if large amounts of foreign material, asbestos containing material, odours or staining is observed.



Ten soil samples were analysed for PCOC identified in **Section 4.0**. There were no concentrations of vTRH, TRH, BTEX, Naphthalene, PCB, OC or OP pesticides or asbestos recorded above the LOR. Vapour generation potential is therefore considered low at the Site. Moreover, vapour generation would be dependent on the presence of a source at or within the vicinity of the Site, which was not identified in this investigation. Detections of BaP TEQ, Total PAHs and heavy metals were reported above the LOR, however all reported concentrations complied with the adopted Site Assessment Criteria.

9.1 Preliminary Waste Classification

Redevelopment works include the excavation of soils for the construction of a basement. Soils will be excavated to approximately 3.0 m bgl and will be require off-site disposal. A preliminary waste classification has been carried out using existing analytical data to provide an indication of what the material will be classified as when it is disposed off-site. Analytical results were compared against the contaminant thresholds presented in Table 1 of the NSW EPA (2014a) *Waste Classification Guidelines, Part 1: Classifying Waste* and Table 4 of the NSW EPA (2014b) *Resource Recovery Order 2014*.

Based on analysis of borelogs and field observations, all excavated soils will be fill material, with the potential for a minor volume of natural material to be excavated. All fill material on-site was suitable for classification as General Solid Waste (GSW), non-putrescible. This material meets GSW CT1 criteria and could be suitable for disposal at a licenced landfill facility that can lawfully receive General Solid Waste. Material could also be suitable for recycling at a recycling facility with an EPA licence to accept soils with the measured concentrations of contaminants, however this will depend on specific facility licence requirements.

Analytical results also indicated that fill material would be potentially suitable for classification as Excavated Natural Material (ENM). In this investigation, samples were not analysed for pH, electrical conductivity or foreign material content due to the lack of sample volume obtained in the boreholes. Additional analysis of Site soils for these parameters is required to determine if material would be suitable for classification as ENM.

Due to the sample volume required to conduct the required analysis for ENM Classification, it is recommended any additional samples be collected following the removal of the hardstand when test pits can be excavated in accordance with the ENM Exemption 2014.


10.0 CONCLUSIONS

The sampling regime and subsequent assessment and reporting are considered to be adequate for assessment purposes to evaluate the suitability of the Site for its intended use in accordance with the requirements of State Environmental Planning Policy No.55 (SEPP 55). All reporting has been undertaken in accordance with the *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA, 2011) and the *Guidelines for the NSW Site Auditor Scheme* (NSW EPA, 2nd ed., 2006).

Based on a review of the available historical and current investigation data, DLA consider that there is a low likelihood of unacceptable contamination to be present on the Site as a result of past and present land use activities. All contaminants in all samples were compliant with the relevant adopted Site Assessment Criteria. Groundwater was not assessed in this investigation. Should groundwater be encountered in future Site works, DLA recommends that a groundwater assessment be conducted.

The DSI concludes that the Site is suitable for the intended land use consistent with NEPM (NEPC, 2013) Commercial/Industrial.



11.0 REFERENCES

Australian Standard AS AS4482.1-2005 (2005) *Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1 – Non-volatile and Semivolatile Compounds*

Chapman, G A, Murphy, C L, Tille, P J, Atkinson, G and Morse, R J (1989) *Sydney Soil Landscapes Map, Series 9130*

Department of Urban Affairs and Planning (DUAP) (1998) *Managing Land Contamination: Planning Guidelines, SEPP 55 - Remediation of Land*

Friebel, E and Nadebaum, P, Cooperative Research Centre for Contaminant Assessment and Remediation of the Environment (CRC CARE) (2010) *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater Part 1: Technical Development Document*

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

NSW DECC (2009) Guidelines on Duty to Report Contamination under the Contamination Land Management Act 1997

NSW EPA (2011) Guidelines for Consultants Reporting on Contaminated Sites

NSW EPA (2006) Guidelines for the NSW Site Auditor Scheme (Second Edition)

NSW EPA (1999) Guidelines on Significant Risk of Harm from Contaminated Land and the Duty to Report

NSW EPA (1995) Sampling Design Guidelines

NSW Government (1979) Environmental Planning and Assessment Act and associated regulations



FIGURE 1

SITE LOCATION



Site Location

<u> </u>	
	DLA Environmental Services A Pacific Environment company

Maitland Office Phone (02) 4933 000

Sydney Office Phone (02) 9476 1765 Fax (02) 9476 1557 Title

Sydney Olympic Park Pub - Site Location

Client Figure No Date			
FDC	1		27/06/2017
Project No.	Scale	Compiled	Revision
DLH4135	As Shown	MP	R00



FIGURE 2

SITE LAYOUT AND SAMPLING LOCATIONS







Project No.

60m DL4135

Date 30/06/2017

scale As Shown

Figure No. 2

Revision

Version 1.0

~			
()		Comple	Locations
	ULA	Sallible	LUCALIONS

L

0m

30m



APPENDIX A

AERIAL PHOTOGRAPHS



















1. 1999 – Original Construction – Attached Structural Plans are for Retaining Wall and Bleachers shown.



2. 2000 – Toilet Block and temporary Olympic Overlay added.





4. 2017 – Current configuration



APPENDIX B

HISTORICAL TITLE SEARCH





Ap	proximate So	ale
0m	30m	60m

Project Title		ci			
Project No.	Date	Scalin	Figure No.	Revision	



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Req:R842159 /Doc:DP 0831539 F /Rev:07-Dec-1994 /Sts:OK.OK /Pgs:ALL /Prt:13-Jun-2017 12:00 /Seq:1 of 13











1004785 P /Rev:17-Aug-1999 /Sts:OK.OK /Pgs:ALL /Prt:13-Jun-2017 11:41 /Seg:1 of 3



/Seq:3 of 3



Reg:R841743 /Doc:DP 1063407 P /Rev:28-Jan-2004 /Sts:SC.OK /Pgs:ALL /Prt:13-Jun-2017 11:37 /Seg:1 of 4









Req:R841743 /Doc:DP 1063407 P /Rev:28-Jan-2004 /Sts:SC.OK /Pgs:RLL /Prt:13-Jun-2017 11:37 /Seq:4 of 4













Reg:R041623 /Doc:DP 1100154 P /Rev:26-Jul-2007 /Sts:SC.OK /Pgs:ALL /Prt:13-Jun-2017 11:29 /Seg:5 of 5








Ref:SOP /Src:M_____

Req:R841404 /Doc:DP 1155500 P /Rev:10-Feb-2011 /Sts:SC.OK /Pgs:ALL /Prt:13-Jun-2017 11:19 /Seq:5 of 6 Ref:SOP /Src:M

PLAN FORM 6 WARNING: Creasing or f	olding will lead to rejection ePlan
DEPOSITED PLAN A	DMINISTRATION SHEET Sheet 1 of 2 sheet(s)
SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads, public reserves and drainage reserves or create easements, restrictions on the use of land and positive covenants PURSUANT TO SEC. 88B OF THE CONVEYANCING ACT 1919, AS	Office Use Only
 AMENDED, IT IS INTENDED TO CREATE: 1. EASEMENT FOR SUPPORT AND SHELTER 7.05 WIDE LIMITED IN STRATUM (FA) 2. EASEMENT FOR SUPPORT AND SHELTER 7.05 WIDE LIMITED IN STRATUM (FB) 3. EASEMENT FOR SUPPORT AND SHELTER 7.05 WIDE LIMITED IN STRATUM (FC) 4. EASEMENT FOR SUPPORT AND SHELTER 7.05 WIDE LIMITED IN STRATUM (FC) 5. EASEMENT FOR SUPPORT 7.05 WIDE LIMITED IN STRATUM (FE) 6. EASEMENT FOR SUPPORT 7.05 WIDE LIMITED IN STRATUM (FF) 	Office Use Only Registered: 9.2.2011 Title System: TORRENS Purpose: SUBDIVISION PLAN OF SUBDIVISION OF LOT 1000 IN DP1127564
	LGA: AUBURN Locality: -HOMEBUSH BAY SYDNEY OLYMPIC PARK Parish: ST JOHN É CONCORD County: CUMBERLAND
	Survey Certificate I, NATHAN MILLIGAN
If chace is insufficient use RI AN EODM 6A appoyute sheet	of PROJECT SURVEYORS (PH 9888 3848)a surveyor registered under the Surveying and Spatial Information Act
Crown Lands NSW/Western Lands Office Approval (Authorised Officer) that all necessary approvals in regard to the allocation of the land	2002, certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying and Spatial Information Regulation 2006 and was completed on: 14 JULY 2010 The survey relates to .LOTS 160 AND 161
shown herein have been given Signature: Date: File Number: Office:	(specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey) Signature
Subdivision Certificate I certify that the provisions of s. 109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to:	Datum Line:"X" – "Y" Type: Urban
the proposed	Plans used in the preparation of surveyDP225350DP1004512DP1121474DP269753DP1004785DP1125680DP831359DP1009020DP1127564DP849975DP1009021DP875723DP1108154DP879226DP1110035
Subdivision Certificate no:	If space is insufficient use PLAN FORM 6A annexure sheet
* Strike through inapplicable parts.	Surveyor's Reference:19246/21235

Req:R841404 /Doc:DP 1155500 P /Rev:10-Feb-2011 /Sts:SC.OK /Pgs:ALL /Prt:13-Jun-2017 11:19 /Seq:6 of 6 Ref:SOP /Src:M DF1133500

folding will lead to rejection ePlar
ADMINISTRATION SHEET Sheet 2 of 2 sheet(s)
Office Use Only DP1155500
Office Use Only Registered: 9.2.2011
Date of Endorsement: 2.8.2010
BY ITS DELEGATE

I

Surveyor's Reference: 19246/21235

2



F

DRIVE

336'35'40'

(AB) -(AB) 63'55'15" 222.08

NR.









VARIOUS AMENDMENTS VIDE 2016-424 6 4 2016





BEARING & DISTANCE IN DIAGRAM 7 & 8 AMENDED VIDE 2016 424



Req:R841310 /Doc:DF 1191648 P /Rev:08-Apr-2016 /Sts:SC.OK /Fgs:ALL /Prt:13-Jun-2017 11:11 /Seq:5 of 10









Req:R841310 /Doc:DP 1191648 P /Rev:08-Apr-2016 /Sts:SC.OK /Pgs:ALL /Prt:13-Jun-2017 11:11 /Seq:9 of 10

PLAN FORM 6 WARNING: Creasing or for	olding will lead to rejection ePlan
DEPOSITED PLAN A	DMINISTRATION SHEET Sheet 1 of 1 sheet(s)
SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads, public reserves and drainage reserves or create easements, restrictions on the use of land and positive covenants SIGNED BY ME NICHOUS UVBLE AS DELEGATE OF THE SYDNEY OLYMPIC PARK AUTHORITY AND HEREBY DECLARE	Office Use Only DP1191648
DELEGATION IN THE PRESENCE OF:	Office Use Only Registered: 19.02.2016 Title System: TORRENS Purpose: SUBDIVISION
SIGNATURE OF WITNESS SOPA BY ITS DELEGATE PETER GRAY (print name of Witness) Address of Witness: Level 1 8 Australia Avenue Sydney Olympic Park NSW 2127	PLAN OF SUBDIVISION OF LOT 2005 IN DP 1192085 AND LOT 17 IN DP 1125680
	LGA: CITY OF AUBURN
	Locality: SYDNEY OLYMPIC PARK
	Parish: CONCORD
	County: CUMBERLAND
If space is insufficient use PLAN FORM 6A annexure sheet Crown Lands NSW/Western Lands Office Approval in approving this plan certify (Authorised Officer) that all necessary approvals in regard to the allocation of the land shown herein have been given	a surveyor registered under the Surveying and Spatial Information Act 2002, certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying and Spatial Information Regulation 2006 and was completed on: 14* November 2011 Lots 61 - 71 ARE COMPLED The survey relates to LOTS 6071 incl. AND CONNECTIONS- (specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)
Signature: Date: File Number	Signature ZW-CT Dated: 15/12/2011 Surveyor registered under the Surveying and Spatial Information Act 2002
Subdivision Certificate	Datum Line: X' - Y' Type: Urban/ Bura l
Assessment Act 1979 have been satisfied in relation to: the proposed	Plans used in the preparation of survey/compilation DP 225350, DP 234801, DP 590090, DP 831539, DP 849975, DP 875723, DP 1036979, DP 1108154, DP 1110035, DP 1125680, DP 1127564, DP 1121474, DP 1130359, DP 1134933, DP DP 1155500, DP 1160458, DP 1192085
Accreditation no: Subdivision Certificate no: File no: * Strike through inapplicable parts.	If space is insufficient use PLAN FORM 6A annexure sheet



John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE _____ 13/6/2017 12:01PM

FOLIO: 1/831539

	First	Title(s):	OLD SYSTEM VOL 4615 FOL 133	VOL 1009 FOL 1	L76
	Prior	Title(s):	1/219 674 11/221 477 1/540955 1-3/774130 1-4/816436	6-9/221477 2/234663 541-542/710562 27/793595 VOL 6129 FOL 2	216
Recorde 7/10/19	ed 993	Number DP831539	Type of Instrumen DEPOSITED PLAN	t -	C.T. Issue FOLIO CREATED EDITION 1
23/11/19	994	U811194	DEPARTMENTAL DEAL	ING	
22/2/19	995	027470	DEPARTMENTAL DEAL	ING	
7/6/19	995	DP849975	DEPOSITED PLAN		FOLIO CANCELLED

*** END OF SEARCH ***



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE 13/6/2017 11:51AM

FOLIO: 102/849975

		Firs	t Title(s):	OLD SYSTEM VOL 4615 FOL 133	VOL 1009 FOL	176
		Prio	r Title(s):	-31/225350- 1/835722	1/831539	
	Recorde	∋d	Number	Type of Instrumen	t	C.T. Issue
	20/6/19	995	DP849975	DEPOSITED PLAN	-	FOLIO CREATED EDITION 1
	9/8/19	995	0446271	DEPARTMENTAL DEAL	ING	
	31/8/19	995	0501067	DEPARTMENTAL DEALI	ING	
1	25/10/19	95	0592912	TRANSFER RELEASING	G EASEMENT	EDITION 2
	8/12/19	95	0738097	REQUEST		EDITION 3
	17/1/19 17/1/19	97 197	2761162 2761163	CAVEAT CAVEAT		
	25/8/19	97	3350461	DEPARTMENTAL DEALI	ING	
	29/8/19	97	DP870992	DEPOSITED PLAN		FOLIO CANCELLED

*** END OF SEARCH ***

SOP

97-11R		REQUEST Real Property Act 1900	SEE COPIES	0 738097 N *ਿ∺ ≁`≊
(A) STAMP DUTY If applicatile.		UFFICE OF STATE HEITENNE OF State (N.S.W. TREENSURY) HRBARDS NO STAMP OUTY IS PAYABLE NO STAMP OUTY IS PAYABLE ON THE INSTRUMENT	Revenue use only	112 - 123 - 123 - 123 - 123 - 123 124 - 123 - 241 - 123 - 241 - 123 - 241 - 123 - 241 - 241 - 241 - 241 - 241 - 241 - 241 - 241 - 241 - 241 - 241
(B) TITLE Show no more than 20.	SEE ANNEXU	RE "A"		
(C) REGISTERED DEALING If applicable.				
(D) LODGED BY	L.T.O. Box 786E	Name, Address or SHAW McDONALD, 8th F Street, Sydney DX 916 Sydney. Tel REFERENCE (max 15 characters	DX and Telephone loor, 179 Elizabeth : 264 9111 Olympic): TE:883686	Dealing Code R

(E) APPLICANT

OLYMPIC CO-ORDINATION AUTHORITY

(F) REQUEST

HOMEBUSH BAY DEVELOPMENT CORPORATION is presently recorded as registered proprietor of the land above described. The Applicant requests the Registrar General to record OLYMPIC CO-ORDINATION AUTHORITY as registered proprietor of the land above described pursuant to Section 39 and, in particular, clauses 7 and 9 of Part 2 Division 2 and clauses 11, 12 and 13 of Part 2 Division 3 of Schedule 2, of the Olympic Co-Ordination Authority Act 1995 which was assented to on 9 June, 1995 and which was proclaimed to commence on 30 June, 1995.

CHECKED BY (office use only)

Emzs

cavents Y543831 + Y624370 do not prevent registration

THIS IS THE ANNEXURE MARKED WITH THE LETTER "A" REFERRED TO IN THE ATTACHED REQUEST DATED , 20 th November , 1995 Made by the olympic co-ordination authority

TORRENS TITLE REFERENCES

FOLIO IDENTIFIERS 101/849975; 102/849975; 2/831539; 4/831539; 5/831539; 6/831539: 7/831539· 1/840154: 11/831538; 50/747909; 52/747909: 56/773763· 57/773763: 58/786296· 59/786296· 60/786296; 70/818981: 71/818981: 72/818981; 73/818981· 74/818981: 22/787402: 24/787402; 3/740790; 54/749222· 25/793595; 26/793595; 302/541070; 4/774130; 6/774130; 7/774130 AND 8/774130.

Signed in my presence by the
Director-General who is
personally known to me
(Aukins :
Signature of Witness
TERRY HUKINS.
Name of Witness (BLOCK LETTERS)
OCA OFFICES Homebust
Address of Witness

Signature of Director-General OLYMPIC CO-ORDINATION AUTHORITY

STANDARD EXECUTION

Certified correct for the purposes of the Real Property Act 1900, Director-General Signed in my presence by the Applicant who is personally known to me.

Signature of Witness ER RN

Name of Witness (BLOCK LETTERS)

CCA OTTACES Home Bush. Address of Witness

Signature of Applement

OLYMPIC CO-ORDINATION AUTHORITY

EXECUTION INCLUDING STATUTORY DECLARATION

Signature of Witness

Name of Witness (BLOCK LETTERS)

.....

Address and Qualification of Witness

Signature of Applicant

(G)

DATE In the November 1995



Information Provided Through John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE ------13/6/2017 11:44AM

FOLIO: 89/870992

Fi Pr	rst Title(s): ior Title(s):	OLD SYSTEM VOL 4615 FOL 133 -72/818981	VOL 1009 102/84997	FOL 176	
Recorded 2/9/1997	Number DP870992	Type of Instrumen DEPOSITED PLAN	.t	C.T. Issue FOLIO CREATED EDITION 1	
27/1/1998 27/1/1998	3750194 3752229	TRANSFER RELEASIN DEPARTMENTAL DEAL	G EASEMENT ING		
28/1/1998	3755286	DEPARTMENTAL DEAL	ING		
11/2/1998	3790947	DEPARTMENTAL DEAL	ING		
10/3/1998	DP875723	DEPOSITED PLAN		FOLIO CANCELLE	D

*** END OF SEARCH ***



John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

RESIDUE REMAINS

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE _____ 13/6/2017 11:44AM

> > \mathbf{x}

FOLIO: 1020/875723 -

First Title(s): OLD SYSTEM VOL 1009 FOL 176 VOL 4615 FOL 133 Prior Title(s): 89/870992 Recorded Number Type of Instrument C.T. Issue --------------------12/3/1998 DP875723 DEPOSITED PLAN FOLIO CREATED EDITION 1 7/8/1998 DP879226 DEPOSITED PLAN FOLIO CANCELLED

*** END OF SEARCH ***



John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE -----13/6/2017 11:44AM

FOLIO: 3010/879226

First Title(s): OLD SYSTEM Prior Title(s): 1020/875723

Recorded	Number	Type of Instrument	C.T. Issue
3/9/1998	DP879226	DEPOSITED PLAN	FOLIO CREATED EDITION 1
28/1/1999	5477773	TRANSFER RELEASING EASEMENT	
4/2/1999	DP269753	DEPOSITED PLAN	
8/2/1999	5576403	DEPARTMENTAL DEALING	EDITION 2
2/8/1999	DP1004512	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***



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FOLIO CANCELLED

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE ------13/6/2017 11:43AM

FOLIO: 4002/1004512

First Title(s): OLD SYSTEM
Prior Title(s): 3010/879226

Recorded	Number	Type of Instrument	C.T. Issue
2/8/1999	DP1004512	DEPOSITED PLAN	FOLIO CREATED
			EDITION 1

12/8/1999 DP1004785 DEPOSITED PLAN

2/12/1999	6380177	TRANSPER.
2/12/1999	6380178	LEASE
2/12/1999	6391649	DEPARTMENTAL DEALING

*** END OF SEARCH ***

Form: 97-01T Licence: LAW/0526/98	TRANSFER 6380177G New South Wales 6380177G Real Property Act 1900 Image: Construction of State Revenue use only Office of State Revenue use only NEW SOUTH WALES DUTY 0000142794-001 SECTION 19(2)
(A) LAND TRANSFERRED If appropriate, specify the	DUTY \$ ####################################
(P) LODGED BY	Lots 5004 and 5005 in DP 1004785
	786E Shaw MeDoudd
	REFERENCE (optional):
(C) TRANSFEROR	OLYMPIC CO-ORDINATION AUTHORITY
(D) acknowledges receipt of the co and as regards the land specifie(E) Encumbrances (if applicable)	Insideration of the terms of a Deed bearing dateZ-44August 1999August 1999August 1999August 1999August 19991.2.3.
(F) TRANSFEREE TS (s713 LGA) TW (Sheriff)	WASTE RECYCLING AND PROCESSING SERVICE OF NEW SOUTH WALES for the purposes of the <i>Waste Recycling and Processing Act 1970</i>
(H) We certify this dealing correct	for the purposes of the Real Property Act 1900. DATE 24 Antony 1999
Signed in my presence by the th Signed by me, Mick O' Co-Ordination Authoir no notice of the revo presence of: Name of Witness Signature of Name and Address	ransferor who is personally known to me. Brien , as Delegate of the Olympic 'ty and I hereby declare that I have cation of such Delegation in the re of Witness (BLOCK LETTERS) if Witness S of Witness S o
Signed in my presence by the THE COMMON SEAL of WAS OF NEW SOUTH WALES was the Waste Recycling an Signatur P.G. DIRAG Name of Witness	transferee who is personally known to me. STE RECYCLING AND PROCESSING SERVICE hereto affixed in accordance with idProcessingAct1970 in the presence re of Witness FO (BLOCK LETTERS)
Addres	s of Witness Page 1 of 1 Nos holger



Information Provided Through John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE ------13/6/2017 11:43AM

FOLIO: 5008/1004785

First Title(s): OLD SYSTEM
Prior Title(s): 4002/1004512

Recorded	Number	Type of Instrument	C.T. Issue
12/8/1999	DP1004785	DEPOSITED PLAN	LOT RECORDED
			FOLIO NOT CREATED
2/12/1999	6391630	DEPARTMENTAL DEALING	FOLIO CREATED
			CT NOT ISSUED
29/12/1999	DP1009020	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

FOLIO: 5103/1009020

First Title(s): OLD SYSTEM Prior Title(s): 5003/1004785 5008/1004785

Number	Type of Instrument	C.T. Issue
DP1009020	DEPOSITED PLAN	FOLIO CREATED CT NOT ISSUED
6459570	DEPARTMENTAL DEALING	EDITION 1
DP1009021	DEPOSITED PLAN	FOLIO CANCELLED
6462910	DEPARTMENTAL DEALING	
	Number DP1009020 6459570 DP1009021 6462910	NumberType of InstrumentDP1009020DEPOSITED PLAN6459570DEPARTMENTAL DEALINGDP1009021DEPOSITED PLAN6462910DEPARTMENTAL DEALING

*** END OF SEARCH ***

Historical Information Provided Through Title

John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE _____ 13/6/2017 11:38AM

FOLIO: 5202/1009021

First Title(s): OLD SYSTEM Prior Title(s): 5103/1009020

Recorded	Number	Type of Instrument		C.T. Issue
30/12/1999	DP1009021	DEPOSITED PLAN		FOLIO CREATED
30/12/1999	6451582	REQUEST		EDITION 1
31/12/1999	6462910	DEPARTMENTAL DEALING		EDITION 2
4/1/2000	6463853	DEPARTMENTAL DEALING		EDITION 3
12/5/2000	6774372	DEPARTMENTAL DEALING		
22/6/2000	6224851	REQUEST		
8/9/2000	7078586	DEPARTMENTAL DEALING		
21/9/2000 21/9/2000	7001432 7001433	REQUEST REQUEST	•	
3/11/2000	7198114	DEPARTMENTAL DEALING		EDITION 4
8/1/2001	DP1020855	DEPOSITED PLAN		
8/1/2001	7275146	WITHDRAWAL OF CAVEAT		
8/1/2001	7275147	WITHDRAWAL OF CAVEAT		
20/6/2001	DP1018860	DEPOSITED PLAN		FOLIO CANCELLED

*** END OF SEARCH ***

PRINTED ON 13/6/2017

Historical Title

Information Provided Through John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

FOLIO: 6001/1018860

First Title(s): OLD SYSTEM Prior Title(s): 5202/1009021

Recorded	Number	Type of Instrument	C.T. Issue
20/6/2001	DP1018860	DEPOSITED PLAN	FOLIO CREATED EDITION 1
22/6/2001	DP1030892	DEPOSITED PLAN	
20/9/2001 20/9/2001	7860384 7860385	LEASE LEASE	EDITION 2
21/9/2001	7962104	DEPARTMENTAL DEALING	
26/2/2002	8372206	APPLICATION	
14/5/2002 14/5/2002	DP1036982 8592808	DEPOSITED PLAN DEPARTMENTAL DEALING	EDITION 3
29/11/2002 29/11/2002 29/11/2002	9002132 9173583 9173578	LEASE DEPARTMENTAL DEALING UNNECESSARY - DEPARTMENTAL DEALING	EDITION 4
7/2/2003	9331769	CAVEAT	
24/2/2003 24/2/2003	DP1049705 9400085	DEPOSITED PLAN DEPARTMENTAL DEALING	
11/8/2003	9839294	REQUEST	
27/1/2004 27/1/2004	DP1062946 DP1063407	DEPOSITED PLAN DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS
21/10/2010	AF828170	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

Lic Edi	vence: '98M111 ition: 0107	AJ NEW (3) So PRIVACY	REGISTER New So ection 46C Real Section 12(4) 7	ED PROPR outh Wales I Property Act Trustee Act 192 formation is leg	JETOF 1900 25 ally requ		
	STAMP DUTY	Office of Sta	te Revenue use	only		83122001	
			х	-		NEN SOUTH WALES DUTY 14-02-2002 0000 SECTION OTHR LEGN-ORIGINA NO DUTY PAYABLE	0892682-001 aL
(A)	LAND	Torrens Title	5002/1004785	; 5006/100478;	5;6001/10	18860	
(B)	REGISTERED DEALING	Number				Torrens Title	
(C)	LODGED BY	Delivery Box 185H	Name, Addres Clayton Utz Levels 22-35 No.1 O'Conne Sydney NSW DX 370 Tel: 9 Reference (opt	S or DX and Te Il Street 2000 0353 4000 tional): 122/167	lephone 4174		CODE AP
(D)	APPLICANT	Sydney Oly	mpic Park Au	thority		1	
(E)	PRESENT REG'D PROPRIETOR	Olympic Co	o-Ordination A	uthority		1997-30	
(F)	NEW REG'D PROPRIETOR	Sydney Oly	mpic Park Aut	thority			
(G)	APPLICATION UNI In regard to the land/regis proprietor on the folio of	DER SECTIO stered dealing s the Register, th	DN 46C REAL pecified above, he land / register	L PROPERT the applicant re red dealing havi	Y ACT 19 equests the l ng vested in	000 Registrar General to record the ne n the new registered proprietor pu	w registered rsuant to-
(H)	Sydney Olympic Park	Authority A	ct 2001 which	commenced 1	July 2001	l.	
(G)	APPLICATION UNI In regard to the land / reg registered proprietor on the	DER SECTIO istered dealing ne folio of the I	N 12(4) TRU specified above Register consequ	STEE ACT 1 e, the applicant n uent on-	925 requests the	e Registrar General to record the n	ew
(I)							······
	DATE	8 / dd	<u>2.</u> //	2002 уууу	TOLYMPIC	HE THE	
(J)	I certify that the applican whose identity I am other	t, with whom I rwise satisfied,	am personally a signed this app	acquainted br 3 lication in my p	Comm resence.	Property Act 1900 by the app	oses of the Real licant.
	Name of Witness Address of Witness	Ton'i Ane 7 Figture	lerson Drive, He	n.	Buy Gov	VERNING LAIRE Exercise Decuces	: ALDA MAZZ
ALL	HANDWRITING MUST BE IN	BLOCK CAPITA	LS. Page 1	of1	A set	t of notes on this form (04RP-2) is	available
SYD.	5\3202\948823.I		N 95	6001/101	from 8860 N 6/101886	Land and Property Information N $0 \subset \tau \left(D^{2} \right)$ $0 \ 185A$	sw. Js

Historical Title

Information Provided Through John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE ------13/6/2017 11:38AM

FOLIO: 6002/1063407

First Title(s): OLD SYSTEM Prior Title(s): 6001/1018860

Recorded	Number	Type of Instrument	C.T. Issue
27/1/2004	DP1063407	DEPOSITED PLAN	FOLIO CREATED EDITION 1
2/2/2004	AA22827	REQUEST	
21/3/2004	AA501351	DEPARTMENTAL DEALING	
4/11/2004	AB63593	REQUEST	
13/12/2004	AB136076	LEASE	
17/3/2005	DP1077801	DEPOSITED PLAN	
26/5/2006	AC149675	LEASE	
13/6/2006 13/6/2006	DP1037124 AC371377	WITHDRAWN - DEPOSITED PLAN DEPARTMENTAL DEALING	EDITION 2
1/2/2007	AC881518	REQUEST	
14/2/2007	AC934841	DEPARTMENTAL DEALING	
28/3/2007	DP1108154	DEPOSITED PLAN	FOLIO CANCELLED
21/10/2010	AF828170	DEPARTMENTAL DEALING	

*** END OF SEARCH ***



John McLaren & Co (NSW) Ph. 02 9231 4872 Fax, 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE _____ 13/6/2017 11:31AM

FOLIO: 152/1108154

First Title(s): OLD SYSTEM 6002/1063407 Prior Title(s): 50/1045522 Type of Instrument Recorded Number C.T. Issue -----------_____ 28/3/2007 DP1108154 DEPOSITED PLAN FOLIO CREATED EDITION 1 4/4/2007 AD33746 DEPARTMENTAL DEALING 28/5/2007 AD113626 REQUEST EDITION 2 25/6/2007 DP1110035 DEPOSITED PLAN FOLIO CANCELLED

*** END OF SEARCH ***



Information Provided Through John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

FOLIO: 16/1110035

Firs Pric	t Title(s): or Title(s):	OLD SYSTEM 79/875562 151-152/11081	.54
Recorded	Number	Type of Instrument	C.T. Issue
25/6/2007	DP1110035	DEPOSITED PLAN	FOLIO CREATED EDITION 1
21/9/2007	AD419866	REQUEST	
5/2/2008	DP1122474	DEPOSITED PLAN	
11/3/2008 11/3/2008 11/3/2008 11/3/2008	AD821345 AD821368 AD821369 AD821406	CAVEAT CAVEAT CAVEAT CAVEAT	
10/6/2008	AE8667	DEPARTMENTAL DEALING	
4/9/2008	AE192385	CAVEAT	
26/11/2008	AE236950	TRANSFER GRANTING EASEMENT	EDITION 2
18/5/2009	DP1125680	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

SOP



John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

> SEARCH DATE ------13/6/2017 11:26AM

FOLIO: 14/1125680

First Title(s): OLD SYSTEM Prior Title(s): 16/1110035

Recorded	Number	Type of Instrument	(C.T. Issue	
18/5/2009	DP1125680	DEPOSITED PLAN]	FOLIO CREATED	
18/5/2009	AE684984	DEPARTMENTAL DEALING	·		
26/5/2009	AE695116	DEPARTMENTAL DEALING			
29/5/2009 29/5/2009	AE715803 DP1127564	DEPARTMENTAL DEALING DEPOSITED PLAN	I	FOLIO CANCELLED	

*** END OF SEARCH ***

SOP



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

FOLIO: 1000/1127564

First Title(s): OLD SYSTEM Prior Title(s): 14/1125680

Recorded	Number	Type of Instrument	C.T. Issue
29/5/2009	DP1127564	DEPOSITED PLAN	FOLIO CREATED EDITION 1
1/6/2009	AE718051	DEPARTMENTAL DEALING	

18/8/2010 DP1114423 WITHDRAWN - PRE-EXAMINATION PLAN

20/1/2011	AF692627	WITHDRAWAL	OF	CAVEAT
20/1/2011	AF692628	WITHDRAWAL	OF	CAVEAT
20/1/2011	AF692860	WITHDRAWAL	OF	CAVEAT
20/1/2011	AF692861	WITHDRAWAL	OF	CAVEAT

- 28/1/2011 AG24403 WITHDRAWAL OF CAVEAT
- 9/2/2011 DP1155500 DEPOSITED PLAN

FOLIO CANCELLED

*** END OF SEARCH ***


Information Provided Through John McLaren & Co (NSW) Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

FOLIO: 161/1155500

First Title(s): OLD SYSTEM Prior Title(s): 1000/1127564

Recorded	Number	Type of Instrument	C.T. Issue
9/2/2011	DP1155500	DEPOSITED PLAN	FOLIO CREATED EDITION 1
25/7/2011	AG388038	CAVEAT	
31/8/2011	AG466253	CAVEAT	
21/12/2011	AG6995 97	CAVEAT	
31/5/2012	DP1174468	DEPOSITED PLAN	EDITION 2
20/6/2012	AH58342	DEPARTMENTAL DEALING	
27/12/2012	DP1180465	DEPOSITED PLAN	EDITION 3
4/4/2013	AH643118	DEPARTMENTAL DEALING	
17/4/2013	AH670215	WITHDRAWAL OF CAVEAT	
19/8/2013	AH954671	CAVEAT	
10/7/2014	DP1185060	DEPOSITED PLAN	
23/4/2015 23/4/2015	AJ344644 AJ345462	TRANSFER OF EASEMENT IN GROSS TRANSFER OF EASEMENT IN GROSS	
23/7/2015	DP1210143	DEPOSITED PLAN	
2/12/2015	DP1192085	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

InfoTrack An Approved LPI NSW Information Broker



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE ------6/6/2017 2:52PM

FOLIO: 2005/1192085

First Title(s): OLD SYSTEM
Prior Title(s): 201/1041756- 161/1155500

Recorded 	Number DP1192085	Type of Instrument DEPOSITED PLAN	C.T. Issue FOLIO CREATED CT NOT ISSUED
10/2/2016	AK207424	WITHDRAWAL OF CAVEAT	
19/2/2016	DP1191648	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

SOP

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE -----6/6/2017 2:51PM

FOLIO: 69/1191648

First Title(s): OLD SYSTEM Prior Title(s): 2005/1192085

Number	Type of Instrument	C.T. Issue
DP1191648	DEPOSITED PLAN	FOLIO CREATED CT NOT ISSUED
DP1212234	DEPOSITED PLAN	EDITION 1
AK512610	DEPARTMENTAL DEALING	
AK558617	DEPARTMENTAL DEALING	
	Number DP1191648 DP1212234 AK512610 AK558617	NumberType of InstrumentDP1191648DEPOSITED PLANDP1212234DEPOSITED PLANAK512610DEPARTMENTAL DEALINGAK558617DEPARTMENTAL DEALING

*** END OF SEARCH ***

SOP

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Title Search

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 69/1191648

SEARCH DATE	TIME	EDITION NO	DATE
6/6/2017	2:36 PM	1	25/2/2016

LAND

LOT 69 IN DEPOSITED PLAN 1191648 AT SYDNEY OLYMPIC PARK LOCAL GOVERNMENT AREA CITY OF PARRAMATTA PARISH OF CONCORD COUNTY OF CUMBERLAND TITLE DIAGRAM DP1191648

FIRST SCHEDULE

SYDNEY OLYMPIC PARK AUTHORITY

SECOND SCHEDULE (18 NOTIFICATIONS)

 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) AND EXCEPTION OF MINERALS - SEE VOL 6129 FOL 216 AND SHEET 3 OF DP849975
 LAND EXCLUDES MINERALS BY CROWN GRANT WITHIN THE PART(S) FORMERIC

- 2 LAND EXCLUDES MINERALS BY CROWN GRANT WITHIN THE PART(S) FORMERLY IN VOL 5018 FOL 1 - SEE J886627 AND LOTS 7-8 IN DP221477
- 3 J886627 LAND EXCLUDES MINERALS SEE LOTS 6-8 IN DP221477 4 DP831539 EASEMENT FOR ELECTRICITY PURPOSES 2 AND 6 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 5 DP831539 EASEMENT FOR SERVICES 17 METRE (S) WIDE AND VARIABLE APPURTENANT TO THE LAND ABOVE DESCRIBED

6451582 EASEMENT RELEASED IN SO FAR AS IT AFFECTS LOTS 5200-5201 IN DP1009021

- 6 L827059 RIGHT OF WAY 20.115 METRE (S) WIDE APPURTEMANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM AFFECTING LOT 100 IN DP1042833 AND LOTS 10 AND 15 IN DP778665
- 7 DP875723 RIGHT OF CARRIAGEWAY VARIABLE WIDTH APPURTENANT TO THE LAND ABOVE DESCRIBED
- 8 DP1110035 EASEMENT FOR OVERHANG 3.9, 0.7 METRE(S) WIDE AND VARIABLE WIDTH (LIMITED IN STRATUM) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 9 DP1155500 EASEMENT FOR SUPPORT AND SHELTER 7.05 METRE(S) WIDE (LIMITED IN STRATUM) REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT APPURTENANT TO THE LAND ABOVE DESCRIBED
- 10 DP1155500 EASEMENT FOR SUPPORT AND SHELTER 7.05 METRE(S) WIDE (LIMITED IN STRATUM) REFERRED TO AND NUMBERED (4) IN THE S.88B INSTRUMENT APPURTENANT TO THE LAND ABOVE DESCRIBED

END OF PAGE 1 - CONTINUED OVER

PRINTED ON 6/6/2017

SOP

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 69/1191648

PAGE 2

SECOND SCHEDULE (18 NOTIFICATIONS) (CONTINUED) 11 DP1155500 EASEMENT FOR SUPPORT 7.05 METRE(S) WIDE (LIMITED IN STRATUM) REFERRED TO AND NUMBERED (5) IN THE S.88B INSTRUMENT APPURTENANT TO THE LAND ABOVE DESCRIBED 12 DP1155500 EASEMENT FOR SUPPORT 7.05 METRE(S) WIDE (LIMITED IN STRATUM) REFERRED TO AND NUMBERED (6) IN THE S.88B INSTRUMENT APPURTENANT TO THE LAND ABOVE DESCRIBED * 13 AG699597 CAVEAT BY AUSGRID * 14 AH954671 CAVEAT BY AUSGRID 15 DP1185060 EASEMENT FOR PUBLIC PEDESTRIAN ACCESS VARIABLE WIDTH (LIMITED IN STRATUM) APPURTENANT TO THE LAND ABOVE DESCRIBED 16 DP1210143 RESTRICTION (S) ON THE USE OF LAND REFERRED TO AND NUMBERED (2) IN THE S.88B INSTRUMENT 17 DP1210143 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (4) IN THE S.88B INSTRUMENT 18 DP1212234 EASEMENT FOR OVERHANGING STRUCTURES 0.5 METRE (S) WIDE (LIMITED IN STRATUM) AFFECTING THE PART (S) SHOWN SO BURDENED IN DP1212234

NOTATIONS

UNREGISTERED DEALINGS: PP DP1191656.

*** END OF SEARCH ***

SOP

PRINTED ON 6/6/2017

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.



APPENDIX C

SECTION 149 CERTIFICATE



PLANNING CERTIFICATE

CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979 as amended

Leap Searching DX 578 SYDNEY

Certificate No: 2017/3208

Fee: \$133.00

Issue Date: 6 June 2017

Receipt No: 4963204

Applicant Ref: SOP:64646

DESCRIPTION OF LAND

Address: 13 Olympic Boulevard SYDNEY OLYMPIC PARK NSW 2127

Lot Details: Lot 69 DP 1191648

SECTION A

The following Environmental Planning Instrument to which this certificate relates applies to the land:

State Environmental Planning Policy (State Significant Precincts) 2005.

For the purpose of **Section 149(2)** it is advised that as the date of this certificate the abovementioned land is affected by the matters referred to as follows:





The land is zoned: MD SEPP (State Significant Precincts) 2005

State Environmental Planning Policy (State Significant Precincts) 2005

The land is excluded land under Auburn Local Environmental Plan 2010. The land zoning and land use provisions of State Environmental Planning Policy (State Significant Precincts) 2005 apply to the land.

The State Environmental Planning Policy (State Significant Precincts) 2005 may be obtained via the internet from www.legislation.nsw.gov.au or by contacting NSW Department of Planning.

SECTION B

State Policies and Regional Environmental Plans

The land is affected by State Environmental Planning Policies and Regional Environmental Plans as detailed in Annexure "B1".

Draft Local Environmental Plan

The land is not affected by a Draft Local Environmental Plan which has been placed on Public Exhibition and has not yet been published.

Development Control Plan

There are no development control plans applying to the land.

The Minister for Planning has issued directions that provisions of an EPI do not apply to certain Part 4 development where a concept plan has been approved under Part 3A.

Development Contribution Plan

The land is not affected by the Auburn Council Development Contributions Plan 2007.

Heritage Item/Heritage Conservation Area

The land has not been identified as containing an item of environmental heritage significance under the provisions of State Environmental Planning Policy (State Significant Precincts) 2005.

The land is located within a Heritage Conservation Area under the provisions of State Environmental Planning Policy (State Significant Precincts) 2005.

Road Widening

The land is excluded land under Auburn Local Environmental Plan 2010. The applicant should refer to State Environmental Planning Policy (State Significant Precincts) 2005 on www.legislation.nsw.gov.au.

Land Reservation Acquisition

The land is excluded land under Auburn Local Environmental Plan 2010. The applicant should refer to State Environmental Planning Policy (State Significant Precincts) 2005 on www.legislation.nsw.gov.au.



Site Compatibility Certificate (Seniors Housing, Infrastructure and Affordable Rental Housing)At the date of issue of this certificate Council is not aware of any

- a. Site compatibility certificate (affordable rental housing),
- a. Site compatibility certificate (infrastructure),
- b. Site compatibility certificate (seniors housing)

in respect to the land issued pursuant to the Environmental Planning & Assessment Amendment (Site Compatibility Certificates) Regulation 2009 (NSW).

Contamination

The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997 – as listed

- a. that the land to which the certificate relates is significantly contaminated land
- b. that the land to which the certificate relates is subject to a management order
- c. that the land to which the certificate relates is the subject of an approved voluntary management proposal
- d. that the land to which the certificate relates is subject to an ongoing maintenance order
- e. that the land to which the certificate relates is the subject of a site audit statement

Tree Preservation

The land is excluded land under Auburn Local Environmental Plan 2010 and the applicant should refer to State Environmental Planning Policy (State Significant Precincts) 2005 on www.legislation.nsw.gov.au.

Council has not been notified of an order under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

Coastal Protection

The land is not affected by Section 38 or 39 of the Coastal Protection Act 1979.

Has an order been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of the Act) on the land (or on public land adjacent to that land)?

Has Council been notified under section 55x of the Coastal Protection Act 1979 that temporary coastal protection works (within the meaning of the Act) have been placed on the land (or on public land adjacent to that land)? **NO**

Has the owner (or any previous owner) of the land been consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act)?



Council Policy

The land is excluded land under Auburn Local Environmental Plan 2010 and the applicant should refer to State Environmental Planning Policy (State Significant Precincts) 2005 on www.legislation.nsw.gov.au.

The land is not affected by a policy that has been adopted by Council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence or any other risk.

Council has adopted a policy covering the entire City of Parramatta to restrict development of any land by reason of the likelihood of flooding.

Council has adopted by resolution a policy on contaminated land that applies to all land within the City of Parramatta. The Policy will restrict the development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Councils website at www.cityofparramatta.nsw.gov.au or from the Customer Service Centre

Council has not been notified of any policies adopted by other public authorities that restrict development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence or other risk.

Council has been notified that the Department of Planning has adopted the New South Wales Coastal Planning Guideline: Adapting to Sea Level Rise (August 2010). The guideline can be viewed at www.planning.nsw.gov.au.

The applicant should also refer to projected sea level rise low, medium and high scenario maps on

http://www.ozcoasts.org.au/climate/Map_images/Sydney/mapLevel2.jsp for further information.

Mine Subsidence

The land is not affected by Section 15 of the Mine Subsidence Compensation Act 1961 proclaiming land to be a Mine Subsidence District.

Bushfire Land

The land is not bushfire prone land.

Threatened Species

The Director General with responsibility for the Threatened Species Conservation Act 1995 has not advised Council that the land includes or comprises a critical habitat.



State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

This does not constitute a Complying Development Certificate under section 85 of the EP&A Act

This information only addresses matters raised in **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.

It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

3. Complying Development

- (1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development 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.
- (2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

General Housing Code

- (1) or
- (2) Refer to State Environmental Planning Policy (State Significant Precincts) 2005.

Rural Housing Code

- (1) or Refer to State Environmental Planning Policy (State Significant
- (2) Precincts) 2005.

Housing Alterations Code and Industrial Alterations Code

- (1) or
- (2) Refer to State Environmental Planning Policy (State Significant Precincts) 2005.

General Development Code

- (1) or
- (2) Refer to State Environmental Planning Policy (State Significant Precincts) 2005.



Commercial and Industrial (New Buildings and Additions) Code

- (1) or
- (2) Refer to State Environmental Planning Policy (State Significant Precincts) 2005.

Subdivisions Code

- (1) or (2)
 - Refer to State Environmental Planning Policy (State Significant Precincts) 2005.

Demolition Code

- (1) or
- (2) Refer to State Environmental Planning Policy (State Significant Precincts) 2005.

Fire Services Code

- (1) or
- (2) Refer to State Environmental Planning Policy (State Significant Precincts) 2005.
- (3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

SPECIAL NOTES

The land is excluded land under Auburn Local Environmental Plan 2010 and the applicant should refer to State Environmental Planning Policy (State Significant Precincts) 2005 on www.legislation.nsw.gov.au.

Applicants for Sections 149 Certificates are advised that Council does not hold sufficient information to fully detail the effect of any encumbrances on the title of the subject land. The information available to Council is provided on the basis that neither Council nor its servants hold out advice or warrant to you in any way its accuracy, nor shall Council or its servants, be liable for any negligence in the preparation of that information. Further information should be sought from relevant Statutory Departments.



SECTION C

The following additional information is issued under Section 149(5)

Pursuant to S149(5) the Council supplies information as set out below on the basis that the Council takes no responsibility for the accuracy of the information. The information if material should be independently checked by the applicant.

The land is located within Sydney Olympic Park and is affected by the Sydney Olympic Park Authority Act, 2001.

The land is considered by Council TO BE ABOVE the 1 in 100 year mainstream flood level.

This information is based on data available to the Council. It is provided on the basis that neither Council nor its servants hold out advice or warrant to you in any way its accuracy, nor shall the Council or its servants, be liable for any negligence in the preparation of that information.

Note: Advisory Information regarding Loose-Fill asbestos Insulation

Research undertaken by the Loose-Fill Asbestos Insulation Taskforce has determined that there is a potential for loose-fill asbestos insulation to be found in residential dwellings constructed prior to 1980 in 28 local government areas including the City of Parramatta.

Some residential homes located in the City of Parramatta may contain loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

Please Contact NSW Fair Trading for further information.

This information has been provided pursuant to section 149(5) of the Environmental Planning and Assessment Act, 1979 as amended.

ANNEXURE "B1"

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act 1979. Note:The following information is supplied in respect of Section 149 and embodies the requirements of Department of Planning Circular No. A2 dated 17 March 1989 and the Ministerial Notification dated 15 December 1986.

State Environmental Planning Policy (State Significant Precincts) 2005.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 State Environmental Planning Policy No. 19 - Bushland in Urban Areas State Environmental Planning Policy No. 21 - Caravan Parks



State Environmental Planning Policy No. 30 - Intensive Agriculture
State Environmental Planning Policy No. 33 - Hazardous and Offensive
Development
State Environmental Planning Policy No. 50 - Canal Estate Development
State Environmental Planning Policy No. 55 - Remediation of Land
State Environmental Planning Policy No. 62 - Sustainable Aquaculture
State Environmental Planning Policy No. 64 - Advertising and Signage
State Environmental Planning Policy No. 65 -Design Quality of Residential
Apartment Development
State Environmental Planning Policy No. 70 - Affordable Housing (Revised
Schemes)
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (State Significant Precincts) 2005
State Environmental Planning Policy (Exempt and Complying Development Code)
2008
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Mining, Petroleum Production and Extractive
Industries) 2007
State Environmental Planning Policy (Housing for Seniors or People with a
Disability) 2004
State Environmental Planning Policy (State and Regional Development) 2011
Draft State Environmental Planning Policy (Competition) 2010
\mathcal{O}

Draft State Environmental Planning Policy (Educational Establishments and Child Care Facilities)

N.B. All enquiries as to the application of Draft, State and Regional Environmental Planning Policies should be directed to The Department of Planning and Infrastructure – 23-33 Bridge Street Sydney NSW 2000.

Greg Dyer Interim General Manager

per

Moto

dated 6 June 2017



APPENDIX D

DANGEROUS GOODS SEARCH



Locked Bag 2906, Lisarow NSW 2252 Customer Experience 13 10 50 ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D17/160061 Your Ref: Amy Dorrington

Attention: Amy Dorrington DLA Environmental Unit 3 38 Leighton Place Hornsby NSW 2077

Dear Ms Dorrington

RE SITE: Lot 69 DP 1191648 Olympic Blvd Sydney Olympic Park NSW

I refer to your site search request received by SafeWork NSW on 6 June 2017 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 us on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely

Customer Service Officer Customer Experience - Operations SafeWork NSW 14 June 2017



APPENDIX E

BORELOGS

DLA Environmental Services A Pacific Environment compeny									L	Borelog	BH1		
Client:				FDC		Job Type:	DSI						
Project	No:			DLH4135		Address:	Olymr	ic Bou	evard	- Sydney Olympic	Park		
Date:	. 110.			15-06-17		Logged By:	Natha	n Eagle		syuncy orympic	Turk		
Contra	ctor:			FICO		Method:							
Hole Si	ze					Co-ordinates:	see Sa	mpling	Locati	ions			
Method	Depth (m)	Graphic Log	USCS Classification	Material Desc	ription		Moisture	Density / Stiffness	Sampling		Comr	ments	
	0.1			Brick									
	0.4			Brown clayey sand to sandy clay with mi End of	inor gravel				CHEM	BH1-0.3 Refusal at 0.4m p	oossible concrete	slab from stairs	
Notes:												Sheet 1 of 1	
Notes:												Sheet 1 of 1	
Metho	d: lid Eliabe *	ugor		Consistency		actic	Moist	ure ,		Density	0059		
32 - 201 HS - HA	nu riight A	t Auger	r	vs - very suit S - Soft	MP - Modium	asuc n Plasticity	D - DN M - M	/ nist		vL - Very L	0026		
ны - по СС - Со	oncrete Co	re		F - Firm	LP - Low Plac	ticity	W - W	et		ND - Med	ium Density		
сс - со РТ - Ри	sh Tube			VS - Verv Stiff	L. LOW FIDS	concy	•• - vV			D - Dense	an benaty		
RC - Ro	ck Coring			H - Hard						VD - Verv	Dense		
	3			Friable - Fb						- 1			

C	-		LA Env						L	Borelog	BH2		
Client:				FDC		Job Type:	DSI						
Projec	t No:			DLH4135		Address:	Olymp	ic Boul	evard	 Sydney Olympic 	Park		
Date:				15-06-17		Logged By:	Natha	n Eagle	2				
Contra Hole S	ize			FICO		Method:	500 53	mpling	Locati	ons			
noic 5	izc		c			co-ordinates.	366 38	mpiing	Locati	10113			
Method	Depth (m)	Graphic Log	USCS Classification	Material De	scription		Moisture	Density / Stiffness	Sampling		Comme	nts	
	0.1			Brick									
	0.3			Brown clayey sand									
				Denue alle alcunité annuel					CHEM	BH2- 0.5			
	0.9			Brown slity clay with gravel	oflog					refusal at 0.9m -	concrete possibly co	oncrete stens	
				End	of Log					refusal at 0.9m -	concrete possibly co	oncrete steps	
	_	-											
							1						
							1						
		1					1						
	_]					1						
							1						
							<u> </u>						
Notes Metho SS - So HS - Ho CC - Co PT - Pu RC - Ro	ilid Flight A ollow Fligh oncrete Co ush Tube ock Coring	Auger ht Auger pre	r	Consistency VS - Very Soft S - Soft F - Firm VS - Very Stiff H - Hard Friable - Fb	Plasticity HP - HighlyPl MP - Mediun LP - Low Plas	lastic n Plasticity tticity	Moist D - Dr M - M W - W	ure / oist et		Density VL - Very I L - Loose MD - Med D - Dense VD - Very	Loose lium Density Dense	Sheet 1 of 1	_
				Friable - Fb									

C			LA Env	ironmental Services				L	Borelog	BH3			
			AP	icric Environment company									
Client:				FDC		Job Type:	DSI						
Projec	t No:			DLH4135		Address:	Olymp	oic Bou	evard ·	- Sydney Olympic	Park		
Date:				15-06-17		Logged By:	Natha	n Eagle	2				
Contra	actor:			FICO		Method:							
Hole S	ize					Co-ordinates:	see Sa	mpling	Locati	ons			
Method	Depth (m)	Graphic Log	USCS Classification	Material De	scription		Moisture	Density / Stiffness	Sampling		Com	nments	
	0.1			Tile and yellow sand									
	0.5 1 1.5			Dark brown clayey sand with gravel. E with depth	lecoming more	e clayey			СНЕМ	BH3- 0.7 BH3- 1.5			
	2			Black estuarine clay with orange sand									
	2.5			Orange and brown silty clay					CHEM	BH3- 2.2			
	_												
	3			weathered shale - natural									
Notes				End of Log								St	eet 1 of 1
Notes: Consistency Plasticity Method: Consistency Plasticity SS - Solid Flight Auger VS - Very Soft HP - HighlyPla HS - Hollow Flight Auger S - Soft MP - Medium CC - Concrete Core F - Firm LP - Low Plast PT - Push Tube VS - Very Stiff RC - Rock Coring H - Hard Friable - Fb			lastic n Plasticity ticity	Moist D - Dry M - M W - W	ure ⁄ oist et		Density VL - Very I L - Loose MD - Med D - Dense VD - Very	Loose lium Density Dense	Sr	leet 1 0T 1			

										Borelog	_		
C		JL											
-	and the second second		A F	vironmental Services Pacific Environment company					L	ocation	BH4		
Client:				FDC		Job Type:	DSI						
Projec	t No:			DLH4135		Address:	Olymp	bic Bou	levard	- Sydney Olympic	: Park		
Date: Contra	actor:			FICO		Logged By: Method:	Natha	n Eagle	2				
Hole S	ize					Co-ordinates:	see Sa	mpling	g Locati	ions			
			on					6					
Method	Depth (m)	Graphic Log	USCS Classificati	Material Desc	ription		Moisture	Density / Stiffnes	Sampling			Comments	
	0.1			Brick									
				Brown silty clay					СНЕМ	BH4- 0.8			
				Brown silty clay - possibly weathered sha gravel and rock with depth weathered shale, yelllow/orange - natur	ale, increasin	g in			СНЕМ	BH8- 3.0 and BH	18-3.0a		
				End of Log									
Votes	:									-			Sheet 1 of 1
Metho	od:	1100-		Consistency	Plasticity	actic	Moist	ure		Density			
50 - در HS - He	ollow Flight	nuger It Auge	r	S - Soft	MP - Mediun	n Plasticity	M - M	r oist		v∟- very L-Loose	LUUSE		
CC - Co	oncrete Co	ore		F - Firm	LP - Low Plas	ticity	W - W	et		MD - Mee	lium Densit	tγ	
PT - Pu	ush Tube			VS - Very Stiff						D - Dense			
RC - Ro	ock Coring			H - Hard						VD - Very	Dense		
				Friable - Fb									

C	_	JL							<u>Borelog</u>	-			
	~	D	LA Env A Pa	ironmental Services acito Environment company					L	ocation	BH5		
Client:				FDC		Job Type:	DSI						
Projec	t No:			DLH4135		Address:	Olymp	oic Bou	levard	- Sydney Olympic	Park		
Date:	ator			15-06-17		Logged By:	Natha	n Eagle	2				
Hole Si	ize			FICO		Co-ordinates:	see Sa	mpling	Locati	ions			
			u										
Method	Depth (m)	Graphic Log	USCS Classificati	Material De	scription		Moisture	Density / Stiffness	Sampling			Comments	
	0.1			Tile and Sand									
	0.5			Brown clayey sand					CHEM	ВН5- 1.0			
	2			Brown clayey sand, increasing clay cor gravel	ntent with dept	th, minor			CHEM	BH5- 1.5			
				Brown silty clay					CHEM	BH5- 3.0, 3.0a ar	nd 3.0b		
				Wet Clayey sand			w						
	_			End of Log									
Notes:													Sheet 1 of 1
Method: Consistency SS - Solid Flight Auger VS - Very Soft HS - Hollow Flight Auger S - Soft CC - Concrete Core F - Firm PT - Push Tube VS - Very Stiff RC - Rock Coring H - Hard Friable - Fb			Consistency VS - Very Soft S - Soft F - Firm VS - Very Stiff H - Hard Friable - Fb	Plasticity HP - HighlyPl MP - Mediur LP - Low Plas	lastic n Plasticity sticity	Moist D - Dr M - M W - W	ure V oist et		Density VL - Very I L - Loose MD - Mec D - Dense VD - Very	Loose lium Density Dense	y		

C		JL	_			Borelog						
		D	LA Env A Pi	rironmental Services acito Environment company					L	ocation	BH6	
Client				FDC		Job Type:	DSI					
Proje	ct No:			DLH4135		Address:	Olymp	oic Bou	levard	- Sydney Olympic	Park	
Date:				15-06-17		Logged By:	Natha	n Eagle	5			
Contr	actor:			FICO		Method:						
Hole S	Size					Co-ordinates:	see Sa	mpling	g Locati	ions		
Method	Depth (m)	Graphic Log	USCS Classification	Material De	scription		Moisture	Density / Stiffness	Sampling		Comme	ints
	0.1			Tile								
	0.35			grey sandy fill					СНЕМ	Hard to drill- pos BH6-0.3	sibly concrete or roa	ad base
	0.6			Brown/orange clayey sand, minor grav	/el				СНЕМ	BH6-0.5		
		-		Brown silty clay					CHEM	BH6-1.5		
	-			Brown silty clay - higher sand composi			CHEM	BH6-2.3				
	2.5	-		grey/orange silty clay								
				weathered bedrock			v					
Notes	:							·				Sheet 1 of 1
Method: Consistency Plasticity					Moist	ure		Density				
SS - Solid Flight Auger VS - Very Soft HP - HighlyPla			lastic	D - Dr	Ý		VL - Very I	Loose				
HS - Hollow Flight Auger S - Soft MP - Medium			n Plasticity	M - M	oist		L - Loose					
CC - Concrete Core F - Firm LP - Low Plastic				sticity	W - W	et		MD - Med	lium Density			
PT - Push Tube VS - Very Stiff								D - Dense				
RC - Rock Coring H - Hard Friable - Fb										VD - Very	Dense	

C			LA Env	ironmental Services		Borelog							
			AB	acino Environment compeny									
Client:				FDC		Job Type:	DSI						
Projec	t No:			DLH4135		Address:	Olymp	oic Boul	evard	- Sydney Olympic	Park		
Date:				15-06-17		Logged By:	Natha	n Eagle					
Contra	actor:			FICO		Method:							
Hole S	ize					Co-ordinates:	see Sa	mpling	Locati	ions			
Method	Depth (m)	Graphic Log	USCS Classification	Material	Description		Moisture	Density / Stiffness	Sampling		Comments	5	
	0.1			Tile									
	0.3			brown/grey clayey sand									
	0.8			brown silty clay									
				brown/grey silty clay									
				Water Table			w			* Bored at FDC re encountered in B at this locaiton	equest to determine if BH1 and BH2 was prese	concrete nt at this locaiton	
Notes												Sheet 1 of 1	
Metho	od:			Consistency	Plasticity		Moist	ure		Density			
SS - So	IIId Flight A	Auger		VS - Very Soft	HP - HighlyP	lastic	D - Dr	/		VL - Very L	loose		
пз - Н СС - С	uilow Fligh	ic Auge	I	S - SOTT F - Firm	IVIP - Mediur	n Plasticity	IVI - M	oist		L - LOOSE	ium Density		
сс - сі РТ - Рі	ush Tuhe			VS - Verv Stiff	LE - LOW MAS	sciency	vv - VV	cı		D - Dense	ium Density		
RC - R	ock Coring			H - Hard						VD - Verv I	Dense		
				Friable - Fb									

Material	Colour
Gravel	
Sandy Gravel	
Clayey gravel	
Gravelly Sand	
Sand	
Clayey Sand	
Silty Sand	
Sandy Silt	
Silt	
Clayey Silt	
Silty Clay	
Sandy Clay	
Gravelly clay	
Clay	
Ash	
Sandstone	
Shale	
Loam	
Fill	
Concrete	
Bitumin / Bituminous Seal	



APPENDIX F

NATA CERTIFIED ANALYTICAL RESULTS

EINIRG	DLAB		IN OF	- CUSTO	- YO	Client			<u>Sydney Lan - cr</u> 12 Ashley St, Cl Ph 02 9910 620	NVIROIAD SELVICES hatswood, NSW 20 10 / sydney@envir	67 olab.com.au
GROU)	ENVIE	ROLAB G	ROUP - Nati	onal phone	number 130	0 42 43 44		Combo1=TRH/I	BTEX/Pb	
Client: DLA	Mada Mada	0			Client Proje	ct Name / Numb	er / Site etc (ie re	port title):	Combo3=TRH/I Combo3=TRH/I	BIEX/PAH/PD BTEX/PAH/Met BTEX/DAH/Met/Dh	
Project Mgr:	O INTRIATION IN	3			PO No.:	an I	2410		Combo5=TRH/L	BTEX/PAH/OC/PCE	s/Met
Sampler:					Envirolab Q	iote No. :			Combo6=TRH/I	BTEX/PAH/OC/OP, BTEX/PAH/OC/PCF	/PCB/Met 8/Met/Phen
Address: Un	iit 3/38 Leighton Place Ho	ornsby			Date results Or choose: Note: Inform	required: standard / same lath in advance if u	day / 1 day / 2 da rgent turnaround is r	iy / 3 day required -	Combo8=TRH/I Combo9=TRH/I Combo10=TRH/	BTEX/PAH/OC/OP BTEX/PAH/OC/OP /BTEX/PAH/OC/OI /BTEX/PAH/OC/OI	/PCB/Met/Phen s/Met/Phen/CN P/PCB/Met/Phen/CN
Phone:		Mob:			Report form	at: esdat / equis	1		Combo12=TRH	/BTEX/PAH/OC/PC	.B/Met/TCLP-PAH ,6 Met
Email: Not	hon. nog k @ ~ ~	dlaenviro	mental.com.	au	Lab Comme	nts:			Combo13=TRH,	/BTEX/PAH/OC/O	P/PCB/Met/TCLP-PAH ,6Met
	Sample	informatio	F				Tests	Required			Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	(aupo e Compo z	pioy					Provide as much information about t sample as you ca
-	BH1-0.3		15.6.17	1:05	×						
2	BH2-0.5		-	-	×						
8	BH3-0.7	e.			7						
4	BH3-2.2				X				(Envinolab	Services
5	844-0-3				×				ENVIROL	AB- Chatswood /	VSW 2067
و	014-3-0				-					Ph: (82)	3910 620(
t	BH4-3.00				_				ON GOL	074691 7	-
	a the								Date Re	sceived: 19 6	
do.	BH65-3.0								TimeR	eceived: 12.30	
6	BH5-3.00								Receive	ed by: Ve	
0	BH6-0.5				×				Iempo	Trelicepadx	
h	BHG-2.3		-	-					Securit	ty: maguBroken/	None
12	1-1-CH									>	
13	BHC-D-3				Ser.						
iq	BHG-1.5										
Relinquished	1 by (Company);	DLA			Received by	(Company):	D:		Lab use only:	Q	
Print Name:	N. Nadre				Print Name:	MO			Samples Received	ved: Cool or An	bient (circle one)
Date & Time.	15.6.17				Date & Time	196117	17-30		Temperature R	teceived at: 6	(if applicable)
Sinnaturo.	1				Signature:				Transported by	v: Hand deliver	ed / courier

ENVIRO	JLAB	CHA	VIN OF	: CUSTO	- YO	Clie	ant				<u>Sydney Lab</u> - 12 Ashley St, Ph 02 9910 62	Envirolab Se Chatswood, 100 / sydney	rvices NSW 2067 /@envirolab	.com.au
GROUI)	ENVI	ROLAB G	ROUP - Nativ	onal phor	e num	oer 1300	42 43 44			Combo1=TRH	/BTEX/Pb	ł	
Client: DLA	1 den Mar	6			Client Proj	ect Nam	/ Number	/ Site etc (id	s report tit	e):	Combo2=IRF Combo3=TRH	//BTEX/PAH	Met Met	
Contact Pers	on: NOCIMEN IVER	3			1.0.0	LO	9	0-4-0			Combo5=TRH	/BTEX/PAH	OC/PCB/Me	t.
Sampler:					Envirolab (Duote No					Combo6=TRH	I/BTEX/PAH,	OC/OP/PCB	/Met
Address: Un	it 3/38 Leighton Place				Date resul	ts require	ïp				Combo8=TRH	I/BTEX/PAH	OC/OP/PCB	/Met/Phen
	Ŧ	lornsby			Or choose	standaı n lab in ad	I same di Ivance if urge	iy / 1 day /	2 day / 3 d 1 is required	ay	Combo9=TRH Combo10=TR Combo11=TR	I/BTEX/PAH H/BTEX/PAH H/BTEX/PAH	/OC/PCB/Me 4/OC/OP/PC 4/OC/PCB/1	et/Phen/CN B/Met/Phen/CN 2met/Phen/CN
Phone:		Mob:			Report for	mat: esd	at / equis /				Combo12=TR	H/BTEX/PA	1/OC/PCB/N	let/TCLP-PAH ,6 Met
imail: not	han . nog le @ ~ ~	<u>Q</u> dlaenviro	nmental.com.	au	Lab Comm	ents:					Combo13=TR	H/BTEX/PAI	4/0C/0P/PC	B/Met/TCLP-PAH ,6Met
	Sample	e informati	u					Ť	ists Requir	ed			and the second se	Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Ecompo 3	Pioy								Provide as much information about (sample as you ca
-	BH1-0.3		15.6.17) :ÓS	×									
2	BH2-0.5		-	1	×									
8	GH3-0.7				Χ.									
Ч	BH3-2.2		_		×						0	E	vitolab Sen	rice.
2	BH4-0-3				X						Enviro	URB- Chat	NSN POORS	2067
9	014-3-0				1)	•	h: (02) 9910	6200
t	BH4-3.00									-	N dol	1001	120	
	9-41R										Date	Received:	9 5	
00	BH&5-3.0				-						Time	Received:	12:30	
6	RH5- 3.0 a										Rece	ved by: v	Liont	
0	BHG-0.5				×						Cool	no. Icelicen	age -	
N	BHC-2.3		-	_							Secu	rity: ImaguE	Sroken/Non	8
12	7.1-5H3					-		-)		
5	RHC-n.3				~	.0								
iq	BHG-1.5													
Alinguiched	hv (Company).	DIA			Received t	v (Comp	anv): El		1	-	Lab use only:	-		
Print Name:	N. Nade				Print Nam	10	. (Samples Rec	eived: Coo	or Ambie	nt (circle one)
Date & Time	15,6,17				Date & Tin	1e: 19	6 13	17-30			Temperature	Received	at: 6.4	(if applicable)
	V											A second		



email: sydney@envirolab.com.au envirolab.com.au

Envirolab Services Pty Ltd Sydney | ABN 37 112 535 645

169420

Client: DLA Environmental Services Pty Ltd Unit 3, 38 Leighton Pl Hornsby NSW 2077 Attention: Nathan Sample log in details: Your Reference: DL4135, SOP Pub No. of samples: 17 Soils Date samples received / completed instructions received 19/06/2017 / 19/06/2017

CERTIFICATE OF ANALYSIS

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:
 26/06/17
 / 23/06/17

 Date of Preliminary Report:
 Not Issued

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 Accredited for compliance with ISO/IEC 17025 - Testing

 Tests not covered by NATA are denoted with *.

Results Approved By:

David Springer General Manager



vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	169420-1	169420-2	169420-3	169420-4	169420-5
Your Reference		BH1	BH2	BH3	BH3	BH4
	-					
Depth		0.3	0.5	0.7	2.2	0.8
DateSampled		15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 lessBTEX (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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	100	105	103	96
vTRH(C6-C10)/BTEXN in Soil						

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	169420-6	169420-7	169420-8	169420-9	169420-10
Your Reference		BH4	BH4	BH5	BH5	BH6
	-					
Depth		3.0	3.0a	3.0	3.0a	0.5
Date Sampled		15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	98	98	101	97

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	169420-1	169420-2	169420-3	169420-4	169420-5
Your Reference		BH1	BH2	BH3	BH3	BH4
	-					
Depth		0.3	0.5	0.7	2.2	0.8
Date Sampled		15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017
		5011	5011	5011	501	5011
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	21/06/2017	21/06/2017	21/06/2017	21/06/2017	21/06/2017
TRHC 10 - C 14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	108	105	106	107	106
svTRH (C10-C40) in Soil						
Our Reference:	UNITS	169420-6	169420-7	169420-8	169420-9	169420-10
Your Reference		BH4	BH4	BH5	BH5	BH6
Depth	-	3.0	3.02	3.0	3.02	0.5
Depin		3.0 15/06/2017	3.0a 15/06/2017	3.0 15/06/2017	3.0a 15/06/2017	0.5
Type of sample		Soil	Soil	Soil	Soil	Soil
		20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
	-	20/00/2017	20/00/2017	20/00/2017	20/00/2017	20/00/2017
	-	21/00/2017	21/00/2017	21/06/2017	21/00/2017	21/00/2017
	ттg/кg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC 29 - C 36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	107	103	107	103	104

PAHs in Soil Our Reference: Your Reference	UNITS 	169420-1 BH1	169420-2 BH2	169420-3 BH3	169420-4 BH3	169420-5 BH4
Depth Date Sampled Type of sample		0.3 15/06/2017 Soil	0.5 15/06/2017 Soil	0.7 15/06/2017 Soil	2.2 15/06/2017 Soil	0.8 15/06/2017 Soil
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	22/06/2017	22/06/2017	22/06/2017	22/06/2017	22/06/2017
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	0.2	0.2	0.1	<0.1	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.5	0.6	0.2	<0.1	0.7
Pyrene	mg/kg	0.5	0.5	0.2	<0.1	0.6
Benzo(a)anthracene	mg/kg	0.2	0.2	0.1	<0.1	0.3
Chrysene	mg/kg	0.2	0.2	0.1	<0.1	0.3
Benzo(b,j+k)fluoranthene	mg/kg	0.4	0.4	0.2	<0.2	0.5
Benzo(a)pyrene	mg/kg	0.2	0.2	0.1	<0.05	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	0.1	<0.1	<0.1	0.2
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	0.2
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 +ve PAH's	mg/kg	2.7	2.7	1.1	<0.05	3.4
Surrogate p-Terphenyl-d14	%	96	97	96	100	98

PAHs in Soil						
Our Reference:	UNITS	169420-6	169420-7	169420-8	169420-9	169420-10
Your Reference		BH4	BH4	BH5	BH5	BH6
Depth		3.0	3.0a	3.0	3.0a	0.5
Date Sampled		15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	22/06/2017	22/06/2017	22/06/2017	22/06/2017	22/06/2017
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	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.1	0.3	0.8
Pyrene	mg/kg	0.1	<0.1	0.1	0.3	0.7
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	0.3
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	0.3
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.3	0.7
Benzo(a)pyrene	mg/kg	0.05	<0.05	0.09	0.2	0.4
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	0.3
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	0.2
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 +ve PAH's	mg/kg	0.3	<0.05	0.4	1.6	4.0
Surrogate p-Terphenyl-d14	%	100	98	97	99	98

Organochlorine Pesticides in soil					
Our Reference:	UNITS	169420-1	169420-3	169420-5	169420-10
Your Reference		BH1	BH3	BH4	BH6
	-				
Depth Deta Compled		0.3	0.7	0.8	0.5
Type of sample		15/06/2017 Soil	15/06/2017 Soil	15/06/2017 Soil	15/06/2017 Soil
Data systemated		20/00/2017	20/00/2017	20/00/2017	20/00/2017
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017
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
Total+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	102	102	102

Organophosphorus Pesticides					
Our Reference:	UNITS	169420-1	169420-3	169420-5	169420-10
Your Reference		BH1	BH3	BH4	BH6
Depth Date Sampled Type of sample		0.3 15/06/2017 Soil	0.7 15/06/2017 Soil	0.8 15/06/2017 Soil	0.5 15/06/2017 Soil
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	102	102	102

PCBs in Soil Our Reference: Your Reference	UNITS	169420-1 BH1	169420-3 BH3	169420-5 BH4	169420-10 BH6
Depth Date Sampled Type of sample		0.3 15/06/2017 Soil	0.7 15/06/2017 Soil	0.8 15/06/2017 Soil	0.5 15/06/2017 Soil
Date extracted	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017
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
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	98	102	102	102
Client Reference:

Acid Extractable metals in soil						
Our Reference:	UNITS	169420-1	169420-2	169420-3	169420-4	169420-5
Your Reference		BH1	BH2	BH3	BH3	BH4
	-					
Depth		0.3	0.5	0.7	2.2	0.8
Date Sampled		15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Arsenic	mg/kg	7	5	5	13	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	12	13	29	13
Copper	mg/kg	18	27	24	26	28
Lead	mg/kg	27	25	26	27	26
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	8	10	4	15
Zinc	mg/kg	32	30	39	12	54
	1					
Acid Extractable metals in soil						
Our Deferences	LINITO	160400 6	160400 7	160400.0	160400.0	160400 10

Our Reference: Your Reference	UNITS 	169420-6 BH4	169420-7 BH4	169420-8 BH5	169420-9 BH5	169420-10 BH6
Depth Date Sampled Type of sample		3.0 15/06/2017 Soil	3.0a 15/06/2017 Soil	3.0 15/06/2017 Soil	3.0a 15/06/2017 Soil	0.5 15/06/2017 Soil
Date prepared	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Arsenic	mg/kg	4	5	8	6	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	13	19	16	17
Copper	mg/kg	35	34	21	22	31
Lead	mg/kg	17	17	24	25	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	14	8	7	10
Zinc	mg/kg	32	33	32	22	32

Client Reference:

Acid Extractable metals in soil		
Our Reference:	UNITS	169420-18
Your Reference		BH1 -
	-	[TRIPLICATE]
Depth		0.3
Date Sampled		15/06/2017
Type of sample		Soil
Date prepared	-	20/06/2017
Date analysed	-	20/06/2017
Arsenic	mg/kg	6
Cadmium	mg/kg	<0.4
Chromium	mg/kg	13
Copper	mg/kg	20
Lead	mg/kg	30
Mercury	mg/kg	<0.1
Nickel	mg/kg	7
Zinc	mg/kg	35

Client Reference: DL4135, SOP Pub

Moisture Our Reference: Your Reference	UNITS 	169420-1 BH1	169420-2 BH2	169420-3 BH3	169420-4 BH3	169420-5 BH4
Depth Date Sampled Type of sample		0.3 15/06/2017 Soil	0.5 15/06/2017 Soil	0.7 15/06/2017 Soil	2.2 15/06/2017 Soil	0.8 15/06/2017 Soil
Date prepared	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	21/06/2017	21/06/2017	21/06/2017	21/06/2017	21/06/2017
Moisture	%	17	14	13	22	12
-						
Moisture						
Our Reference:	UNITS	169420-6	169420-7	169420-8	169420-9	169420-10
Your Reference		BH4	BH4	BH5	BH5	BH6
	-					
Depth		3.0	3.0a	3.0	3.0a	0.5
Date Sampled		15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2017	20/06/2017	20/06/2017	20/06/2017	20/06/2017
Date analysed	-	21/06/2017	21/06/2017	21/06/2017	21/06/2017	21/06/2017
Moisture	%	9.6	9.6	22	19	15

Client Reference: DL4135, SOP Pub

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-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. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
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-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.
	Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
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 actually="" and="" approach="" are="" at="" be="" calculation="" can="" conservative="" contribute="" false="" give="" given="" is="" li="" may="" most="" not="" pahs="" positive="" pql.="" present.<="" teq="" teqs="" that="" the="" this="" to=""> </pql>
	2. 'TEQ zero' values are assuming all contributing PAHs reported as <pql and="" approach="" are="" below="" but="" calculation="" conservative="" contribute="" false="" is="" least="" more="" negative="" pahs="" pql.<="" present="" susceptible="" td="" teq="" teqs="" that="" the="" this="" to="" when="" zero.=""></pql>
	3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <pql are="" half="" pql.<br="" stipulated="" the="">Hence a mid-point between the most and least conservative approaches above.</pql>
	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-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
	Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-008	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.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
	Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.

Client Reference: DL4135, SOP Pub

MethodID	Methodology Summary
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 °C for a minimum of 12 hours.

Client Reference: DL4

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXNin Soil						Base II Duplicate II % RPD		
Date extracted	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-6	20/06/2017
Date analysed	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-6	20/06/2017
TRHC6 - C9	mg/kg	25	Org-016	<25	169420-1	<25 <25	LCS-6	108%
TRHC6 - C10	mg/kg	25	Org-016	<25	169420-1	<25 <25	LCS-6	108%
Benzene	mg/kg	0.2	Org-016	<0.2	169420-1	<0.2 <0.2	LCS-6	111%
Toluene	mg/kg	0.5	Org-016	<0.5	169420-1	<0.5 <0.5	LCS-6	110%
Ethylbenzene	mg/kg	1	Org-016	<1	169420-1	<1 <1	LCS-6	105%
m+p-xylene	mg/kg	2	Org-016	~2	169420-1	<2 <2	LCS-6	108%
o-Xylene	mg/kg	1	Org-016	<1	169420-1	<1 <1	LCS-6	102%
naphthalene	mg/kg	1	Org-014	<1	169420-1	<1 <1	[NR]	[NR]
<i>Surrogate</i> aaa- Trifluorotoluene	%		Org-016	100	169420-1	97 97 RPD: 0	LCS-6	114%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH (C10-C40) in Soil						Base II Duplicate II % RPD		
Date extracted	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-6	20/06/2017
Date analysed	-			21/06/2 017	169420-1	21/06/2017 21/06/2017	LCS-6	21/06/2017
TRHC 10 - C14	mg/kg	50	Org-003	<50	169420-1	<50 <50	LCS-6	111%
TRHC 15 - C28	mg/kg	100	Org-003	<100	169420-1	<100 <100	LCS-6	106%
TRHC29 - C36	mg/kg	100	Org-003	<100	169420-1	<100 <100	LCS-6	106%
TRH>C10-C16	mg/kg	50	Org-003	<50	169420-1	<50 <50	LCS-6	111%
TRH>C16-C34	mg/kg	100	Org-003	<100	169420-1	<100 <100	LCS-6	106%
TRH>C34-C40	mg/kg	100	Org-003	<100	169420-1	<100 <100	LCS-6	106%
Surrogate o-Terphenyl	%		Org-003	111	169420-1	108 106 RPD:2	LCS-6	93%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II % RPD		
Date extracted	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-6	20/06/2017
Date analysed	-			22/06/2 017	169420-1	22/06/2017 22/06/2017	LCS-6	22/06/2017
Naphthalene	mg/kg	0.1	Org-012	<0.1	169420-1	<0.1 <0.1	LCS-6	101%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	169420-1	<0.1 <0.1	LCS-6	94%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	169420-1	0.2 0.2 RPD:0	LCS-6	104%
Anthracene	mg/kg	0.1	Org-012	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	169420-1	0.5 0.5 RPD:0	LCS-6	101%
Pyrene	mg/kg	0.1	Org-012	<0.1	169420-1	0.5 0.5 RPD:0	LCS-6	100%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	169420-1	0.2 0.2 RPD:0	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	169420-1	0.2 0.2 RPD:0	LCS-6	117%
Benzo(b,j +k)fluoranthene	mg/kg	0.2	Org-012	<0.2	169420-1	0.4 0.4 RPD:0	[NR]	[NR]

Client Reference: DL4135, SOP Pub								
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II % RPD		
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	169420-1	0.2 0.2 RPD:0	LCS-6	103%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	169420-1	0.1 0.1 RPD:0	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	169420-1	0.1 0.1 RPD:0	[NR]	[NR]
Surrogate p-Terphenyl- d14	%		Org-012	99	169420-1	96 98 RPD:2	LCS-6	116%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II % RPD		
Date extracted	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-3	20/06/2017
Date analysed	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-3	20/06/2017
HCB	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	73%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	94%
Heptachlor	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	90%
delta-BHC	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	91%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	93%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	95%
Dieldrin	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	102%
Endrin	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	89%
pp-DDD	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	97%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	LCS-3	74%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	101	169420-1	98 102 RPD:4	LCS-3	111%

Client Reference: D

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-3	20/06/2017
Date analysed	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-3	20/06/2017
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	85%
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Diazinon	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	85%
Dimethoate	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	90%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	97%
Malathion	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	80%
Parathion	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	97%
Ronnel	mg/kg	0.1	Org-008	<0.1	169420-1	<0.1 <0.1	LCS-3	92%
Surrogate TCMX	%		Org-008	101	169420-1	98 102 RPD:4	LCS-3	103%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II % RPD		,
Date extracted	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-3	20/06/2017
Date analysed	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-3	20/06/2017
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	LCS-3	107%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	169420-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	101	169420-1	98 102 RPD:4	LCS-3	103%

Client Reference: DL4135,

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate	Duplicate results	Spike Sm#	Spike %
Acid Extractable metals					Sm#	Base II Duplicate II % RPD		Recovery
in soil								
Date prepared	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-6	20/06/2017
Date analysed	-			20/06/2 017	169420-1	20/06/2017 20/06/2017	LCS-6	20/06/2017
Arsenic	mg/kg	4	Metals-020	<4	169420-1	7 8 RPD:13	LCS-6	114%
Cadmium	mg/kg	0.4	Metals-020	<0.4	169420-1	<0.4 <0.4	LCS-6	102%
Chromium	mg/kg	1	Metals-020	<1	169420-1	15 13 RPD:14	LCS-6	110%
Copper	mg/kg	1	Metals-020	<1	169420-1	18 18 RPD:0	LCS-6	108%
Lead	mg/kg	1	Metals-020	<1	169420-1	27 23 RPD: 16	LCS-6	105%
Mercury	mg/kg	0.1	Metals-021	<0.1	169420-1	<0.1 <0.1	LCS-6	108%
Nickel	mg/kg	1	Metals-020	<1	169420-1	7 4 RPD:55	LCS-6	106%
Zinc	mg/kg	1	Metals-020	<1	169420-1	32 24 RPD:29	LCS-6	108%
QUALITYCONTROL	UNITS	S I	Dup. Sm#		Duplicate	Spike Sm#	Spike % Reco	very
vTRH(C6-C10)/BTEXNin				Base+I	Duplicate+%RP	D		
Soil								
Date extracted	-	1	69420-10	20/06/2	2017 20/06/201	7 169420-3	20/06/2017	7
Date analysed	-	1	69420-10	20/06/2	2017 20/06/201	7 169420-3	20/06/2017	7
TRHC6 - C9	mg/kg	g 1	69420-10		<25 <25	169420-3	92%	
TRHC6 - C10	mg/kg	g 1	69420-10	<25 <25 169420-3		92%		
Benzene	mg/k	g 1	69420-10		<0.2 <0.2	169420-3	93%	
Toluene	mg/k	g 1	69420-10		<0.5 <0.5	169420-3	94%	
Ethylbenzene	mg/k	g 1	69420-10		<1 <1	169420-3	85%	
m+p-xylene	mg/k	g 1	69420-10		<2 <2	169420-3	95%	
o-Xylene	mg/k	g 1	69420-10		<1 <1	169420-3	85%	
naphthalene	mg/kg	g 1	69420-10		<1 <1	[NR]	[NR]	
<i>Surrogate</i> aaa- Trifluorotoluene	%	1	69420-10	97	99 RPD:2	169420-3	100%	
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	6 I	Dup.Sm#	Base+I	Duplicate Duplicate+%RP	Spike Sm# D	Spike % Reco	very
Date extracted		1	69420-10	20/06/2	2017 20/06/201	7 169420-3	20/06/201	7
Date analysed	_	1	69420-10	21/06/2	2017 21/06/201	7 169420-3	21/06/2017	7
TRHC 10 - C14	ma/ke	a 1	69420-10	2.70072	<50 <50	169420-3	97%	
TRHC 15 - C28	mg/kg	g 1	69420-10	<	:100 <100	169420-3	99%	
TRHC29 - C36	mg/k	g 1	69420-10	<	:100 <100	169420-3	79%	
TRH>C10-C16	mg/k	g 1	69420-10		<50 <50	169420-3	97%	
TRH>C16-C34	mg/k	g 1	69420-10	<	:100 <100	169420-3	99%	
TRH>C34-C40	mg/kg	g 1	69420-10	<	:100 <100	169420-3	79%	
Surrogate o-Terphenyl	%	1	69420-10	104	104 RPD:0	169420-3	106%	

Client Reference

DI 4135 SOP Pub

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QUALITY CONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
Date extracted	-	169420-10	20/06/2017 20/06/2017	169420-3	20/06/2017
Date analysed	-	169420-10	22/06/2017 22/06/2017	169420-3	22/06/2017
Naphthalene	mg/kg	169420-10	<0.1 <0.1	169420-3	99%
Acenaphthylene	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	169420-10	<0.1 <0.1	169420-3	90%
Phenanthrene	mg/kg	169420-10	0.2 0.5 RPD:86	169420-3	91%
Anthracene	mg/kg	169420-10	<0.1 0.1	[NR]	[NR]
Fluoranthene	mg/kg	169420-10	0.8 1.1 RPD:32	169420-3	92%
Pyrene	mg/kg	169420-10	0.7 1.1 RPD:44	169420-3	97%
Benzo(a)anthracene	mg/kg	169420-10	0.3 0.5 RPD:50	[NR]	[NR]
Chrysene	mg/kg	169420-10	0.3 0.5 RPD:50	169420-3	110%
Benzo(b,j+k)fluoranthene	mg/kg	169420-10	0.7 0.8 RPD:13	[NR]	[NR]
Benzo(a)pyrene	mg/kg	169420-10	0.4 0.55 RPD:32	169420-3	110%
Indeno(1,2,3-c,d)pyrene	mg/kg	169420-10	0.3 0.3 RPD:0	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	169420-10	0.2 0.3 RPD:40	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	169420-10	98 97 RPD:1	169420-3	112%
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate		
Organochlorine Pesticides			Base + Duplicate + %RPD		
in soil					
Date extracted	-	169420-10	20/06/2017 20/06/2017		
Date analysed	-	169420-10	20/06/2017 20/06/2017		
HCB	mg/kg	169420-10	<0.1 <0.1		
alpha-BHC	mg/kg	169420-10	<0.1 <0.1		
gamma-BHC	mg/kg	169420-10	<0.1 <0.1		
beta-BHC	mg/kg	169420-10	<0.1 <0.1		
Heptachlor	mg/kg	169420-10	<0.1 <0.1		
delta-BHC	mg/kg	169420-10	<0.1 <0.1		
Aldrin	mg/kg	169420-10	<0.1 <0.1		
Heptachlor Epoxide	mg/kg	169420-10	<0.1 <0.1		
gamma-Chlordane	mg/kg	169420-10	<0.1 <0.1		
alpha-chlordane	mg/kg	169420-10	<0.1 <0.1		
Endosulfan I	mg/kg	169420-10	<0.1 <0.1		
pp-DDE	mg/kg	169420-10	<0.1 <0.1		
Dieldrin	mg/kg	169420-10	<0.1 <0.1		
Endrin	mg/kg	169420-10	<0.1 <0.1		
pp-DDD	ma/ka	169420-10	 <0.1 <0.1		
Endosulfan II	ma/ka	169420-10	~0.1 <0.1		
pp-DDT	ma/ka	169420-10	<0.1 <0.1		
Endrin Aldehyde	ma/ka	169420-10	<0.1 <0.1		
Endosulfan Sulphate	ma/ka	169420-10	<0.1 <0.1		
	пуку	103420-10	<u></u>		

		Client Reference	e: DL4135, SOP Pub		
QUALITYCONTROL	UNITS	Dup. Sm#	Duplicate		
Organochlorine Pesticides in soil			Base + Duplicate + %RPD		
Methoxychlor	mg/kg	169420-10	<0.1 <0.1		
Surrogate TCMX	%	169420-10	102 114 RPD:11		
QUALITYCONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	169420-10	20/06/2017 20/06/2017	169420-3	20/06/2017
Date analysed	-	169420-10	20/06/2017 20/06/2017	169420-3	20/06/2017
Azinphos-methyl (Guthion)	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	169420-10	<0.1 <0.1	169420-3	76%
Chlorpyriphos-methyl	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Diazinon	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Dichlorvos	mg/kg	169420-10	<0.1 <0.1	169420-3	84%
Dimethoate	mg/kg	169420-10	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	169420-10	<0.1 <0.1	169420-3	91%
Fenitrothion	mg/kg	169420-10	<0.1 <0.1	169420-3	80%
Malathion	mg/kg	169420-10	<0.1 <0.1	169420-3	97%
Parathion	mg/kg	169420-10	<0.1 <0.1	169420-3	91%
Ronnel	mg/kg	169420-10	<0.1 <0.1	169420-3	85%
Surrogate TCMX	%	169420-10	102 114 RPD:11	169420-3	100%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	-	169420-10	20/06/2017 20/06/2017		
Date analysed	-	169420-10	20/06/2017 20/06/2017		
Aroclor 1016	mg/kg	169420-10	<0.1 <0.1		
Aroclor 1221	mg/kg	169420-10	<0.1 <0.1		
Aroclor 1232	mg/kg	169420-10	<0.1 <0.1		
Aroclor 1242	mg/kg	169420-10	<0.1 <0.1		
Aroclor 1248	mg/kg	169420-10	<0.1 <0.1		
Aroclor 1254	mg/kg	169420-10	<0.1 <0.1		
Aroclor 1260	mg/kg	169420-10	<0.1 <0.1		
Surrogate TCLMX	%	169420-10	102 114 RPD:11		

	Client Reference: DL4135, SOP Pub							
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery			
Acid Extractable metals in soil			Base + Duplicate + %RPD					
Date prepared	-	169420-10	20/06/2017 20/06/2017	169420-3	20/06/2017			
Date analysed	-	169420-10	20/06/2017 20/06/2017	169420-3	20/06/2017			
Arsenic	mg/kg	169420-10	9 6 RPD:40	169420-3	99%			
Cadmium	mg/kg	169420-10	<0.4 <0.4	169420-3	91%			
Chromium	mg/kg	169420-10	17 16 RPD:6	169420-3	102%			
Copper	mg/kg	169420-10	31 25 RPD: 21	169420-3	107%			
Lead	mg/kg	169420-10	25 26 RPD:4	169420-3	99%			
Mercury	mg/kg	169420-10	<0.1 <0.1	169420-3	104%			
Nickel	mg/kg	169420-10	10 13 RPD:26	169420-3	98%			
Zinc	mg/kg	169420-10	32 43 RPD:29	169420-3	98%			

Report Comments:

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 169420-1 for Ni. Therefore a triplicate result has been issued as laboratory sample number 169420-18.

Asbestos ID was analysed by Approved Identifier: Asbestos ID was authorised by Approved Signatory: Not applicable for this job Not applicable for this job

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.

Measurement Uncertainty estimates are available for most tests upon request.

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SGS	Company Name:	ame: DZA			024135 S.O.P Pub
SGS Environmental Services Sydney				Purchase Order No:	
Unit 16, 33 Maddox Street Alexandria NSW 2015	Address:			Results Required Date:	Sta
Telephone No: (02) 85940400				Telephone:	Fax:
Email: au.samplereceipt.sydney@sgs.com	Contact Name:	Nothan 1	Naeylo		nathannagle @ dieenvitonMental.com.ou
Lab ID Number:(please quote on correspondence)	Quotation No:			Email Results to:	Sydney @
	Tick as		ANALYSI	S REQUESTED	REPORT FORMAT
	Appropriate	ERS			CSV
		TAIN			
	ample	Q CON			GO, Guidelines
SGS Client Sample ID Sampling	lid Sa Juid S	L. J.			Notes/Guidelines/LOR/
ID Date/ Time	<u>ot</u> So	^o z ^o			Special instructions
1 BA5-3.06 15.6.17		1			
					05166896 606
					Beceived: 19 – Jun – 2017
Relinquished By: N. Nacke	Date/Time: [L	5.6.17	Received By:	Bul	Date/Time: Palacing @ 1~
Relinquished By:	Date/Time:	<u> </u>	Received By:		Date/Time:
Samples Intact: (es)/ No	Temperature:	~~ °C	Sample Security Sealed: Yes	s / No	Hazards: e.g. may contain Asbestos
Comments / Subcontracting details:					



ANALYTICAL REPORT





- CLIENT DETAILS		LABORATORY DE	TAILS
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Email	nathan.nagle@dlaenvironmental.com.au	Email	au.environmental.sydney@sgs.com
Project	DL4135 - S.O.P Pub	SGS Reference	SE166896 R1
Order Number	(Not specified)	Date Received	19/6/2017
Samples	1	Date Reported	27/6/2017

COMMENTS

Accredited for compliance with ISO/IEC 17025-Testing. NATA accredited laboratory 2562(4354).

This report cancels and supersedes the report No.SE166896 R0 issued by SGS Environment, Health and Safety due to amended sample description.

SIGNATORIES

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Kinth

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Member of the SGS Group

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in

Huong Crawford

Production Manager



SE166896 R1

VOC's in Soil [AN433] Tested: 19/6/2017

			BH5-3.0b
			SOIL
			- 15/6/2017
PARAMETER	UOM	LOR	SE166896.001
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1



Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 19/6/2017

			BH5-3.0b
			SOIL -
PARAMETER	UOM	LOR	SE166896.001
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25



SE166896 R1

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 20/6/2017

		1.05	BH5-3.0b SOIL - 15/6/2017
	UCIM	LOK	3E100890.001
1RH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH C10-C40 Total	mg/kg	210	<210



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 20/6/2017

			BH5-3.0b
			SOIL
			- 15/6/2017
PARAMETER	UOM	LOR	SE166896.001
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	0.1
Pyrene	mg/kg	0.1	0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ</td><td>0.2</td><td><0.2</td></lor=0<>	TEQ	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8



Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 20/6/2017

			BH5-3.0b
			SOIL
			15/6/2017
PARAMETER	UOM	LOR	SE166896.001
Arsenic, As	mg/kg	3	10
Cadmium, Cd	mg/kg	0.3	0.4
Chromium, Cr	mg/kg	0.3	15
Copper, Cu	mg/kg	0.5	20
Lead, Pb	mg/kg	1	26
Nickel, Ni	mg/kg	0.5	4.2
Zinc, Zn	mg/kg	0.5	25



Mercury in Soil [AN312] Tested: 20/6/2017

			BH5-3.0b
			SOIL
			15/6/2017
PARAMETER	UOM	LOR	SE166896.001
Mercury	mg/kg	0.05	<0.05



Moisture Content [AN002] Tested: 20/6/2017

			BH5-3.0b
			SOIL
			15/6/2017
PARAMETER	UOM	LOR	SE166896.001
% Moisture	%w/w	0.5	21



METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <lor <="" <lor="" all="" and="" are="" assuming="" half="" lor="" lor.<="" results="" second="" td="" the="" third="" zero,=""></lor>
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.



FOOTNOTES -

NATA accreditation does not cover the performance of this service. Indicative data, theoretical holding time exceeded.

Not analysed. NVL Not validated. Insufficient sample for analysis. IS I NR

Sample listed, but not received.

UOM Unit of Measure. LOR Limit of Reporting. Raised/lowered Limit of Reporting.

î↓

Samples analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-OU-022%20OA%20OC 20Plan.pdf

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AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

Suite 710/ 90 George Street, Hornsby NSW 2077 PO Box 1644 Hornsby Westfield NSW 1635 Ph: 02 9987 2183, Fax: 02 9987 2151 Email: <u>aset@bigpond.net.au</u>

ASET JOB NO: A SE7 57393/6057	3/1-10	Contact Name: N.Nagle		lst	-	nt		·
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AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET57393 / 60573 / 1 - 10 Your ref: DL4135- S.O.P Pub NATA Accreditation No: 14484

21 June 2017

DLA Environmental Services Pty Ltd 3/38 Leighton Place Hornsby NSW 2077



Accredited for compliance with ISO/IEC 17025.

Attn: Mr Nathan Nagle

Dear Nathan

Asbestos Identification

This report presents the results of ten samples, forwarded by DLA Environmental Services Pty Ltd on 19 June 2017, for analysis for asbestos.

1.Introduction: Ten samples forwarded were examined and analysed for the presence of asbestos.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction) (Qualitative Analysis only).

 3. Results: Sample No. 1. ASET57393 / 60573 / 1. BH1 - 0.3. Approx dimensions 7.0 cm x 7.0 cm x 5.5 cm The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of bitumen and plaster. No asbestos detected.

> Sample No. 2. ASET57393 / 60573 / 2. BH2 - 0.5. Approx dimensions 8.0 cm x 7.0 cm x 5.0 cm The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of bitumen and plaster. No asbestos detected.

> Sample No. 3. ASET57393 / 60573 / 3. BH3 - 0.7. Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster. No asbestos detected.

> Sample No. 4. ASET57393 / 60573 / 4. BH3 - 2.2. Approx dimensions 8.0 cm x 8.0 cm x 6.2 cm The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster. No asbestos detected.

> Sample No. 5. ASET57393 / 60573 / 5. BH4 - 0.8. Approx dimensions 9.0 cm x 8.0 cm x 5.3 cm The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, paint flakes, glass and bitumen. No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635 PHONE: (02) 99872183 FAX: (02)99872151 EMAIL:info@ausset.com.au WEBSITE: <u>www.Ausset.com.au</u>



Sample No. 6. ASET57393 / 60573 / 6. BH4 - 3.0.

Approx dimensions 7.0 cm x 6.0 cm x 5.7 cm The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.

No asbestos detected.

Sample No. 7. ASET57393 / 60573 / 7. BH5 - 3.0.

Approx dimensions 7.0 cm x 7.0 cm x 5.6 cm The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.

No asbestos detected.

Sample No. 8. ASET57393 / 60573 / 8. BH3 - 1.5.

Approx dimensions 8.0 cm x 7.0 cm x 5.6 cm The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.

No asbestos detected.

Sample No. 9. ASET57393 / 60573 / 9. BH6 - 0.5. Approx dimensions 7.0 cm x 6.0 cm x 6.0 cm The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of bitumen and plaster. No asbestos detected.

Sample No. 10. ASET57393 / 60573 / 10. BH6 - 2.3. Approx dimensions 7.5 cm x 7.0 cm x 5.5 cm The sample consisted of a mixture of clayish soil, stones and plant matter. No asbestos detected.

Analysed and reported by,

CamAL

Chamath Annakkage. BSc Analyst /Approved Identifier

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg) Occupational Hygienist / Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964 -2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by AS4964-2004. Trace / respirable level asbestos will be reported only when detected.



APPENDIX G

DATA SUMMARY TABLE

	IJ				NEPM (NEPC, 2013) Comm / Ind Land Use Criteria (mg/kg)	Asbestos	HSL: 3, ESL: 75	HSL: NL, ESL: 135	HSL: NL, ESL: 165	HSL: 230, ESL: 180	N	C6-C10 HSL: 260, ESL: 215, ML: 700	>C10-C16 HSL: NL, ESL: 170, ML: 1,000	>C16-C34 HSL: NL, ESL: 1,700, ML: 5,000	>C34-C40 HSL: NL, ESL: 3,300, ML: 10,000	ESL: 1.4	HIL: 40, ESL: 1.4	4,000	DDT+DDD+DDE 3,600	Aldrin+Dieldrin 45	Chlordane 530	Endosulfan 2,000	Endrin 100	Heptachlor 50	HCB 80	Methoxychlor 2,500		7	3,000	006	3,600 240,000	1,500	730	6,000	400,000
								BTEX - Sandy soils			TRH -			andy soils	dy soils		РАН		Pestici				Pesticid	ides				Heavy Metals							
Sample ID	Depth (m)	Date	Chemical Report	Soil Desciption	Comment		Benz	Toluen	EthylBe	Xylene	Naph	F1	F1 F2		F4	BaP	BaP TEQ	Total	ос					OP			РСВ	As	Cd	Cr Cu	ı Pb	Hg	Ni	Zn	
BH1	0.3	15-Jun-17	169420, ASET 57393	Brown clayey sand to sandy clay, minor gravel		No AF/FA	< 0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.2	< 0.5	2.7	< 0.1	<0.1	< 0.1	< 0.1	< 0.1	<0.1	< 0.1	<0.1	< 0.1	<0.1	7	< 0.4 1	15 18	3 27	< 0.1	7	32
BH2	0.5	15-Jun-17	169420, ASET 57393	Brown silty clay with gravel		No AF/FA	<0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.2	< 0.5	2.7											5	< 0.4 1	12 27	1 25	< 0.1	8	30
BH3	0.7	15-Jun-17	169420, ASET 57393	Dark brown clayey sand with gravel		No AF/FA	<0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.1	< 0.5	1.1	<0.1	<0.1	< 0.1	<0.1	< 0.1	<0.1	< 0.1	<0.1	<0.1	<0.1	5	< 0.4 1	13 24	4 26	< 0.1	10	39
BH3	1.5	15-Jun-17	ASET 57393	Black estuarine clay with orange sand		No AF/FA																													
BH3	2.2	15-Jun-17	169420, ASET 57393	Orange/brown silty clay		No AF/FA	< 0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	< 0.05	< 0.5	< 0.05											13	< 0.4 2	29 26	27 ذ	< 0.1	4	12
BH4	0.8	15-Jun-17	169420, ASET 57393	Brown silty clay		No AF/FA	<0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.3	< 0.5	3.4	<0.1	<0.1	< 0.1	<0.1	< 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	4	< 0.4 1	13 28	3 26	< 0.1	15	54
BH4	3	15-Jun-17	169420, ASET 57393	Weathered shale, yellow/orange		No AF/FA	<0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.05	<0.5	0.3											4	< 0.4 1	11 35	i 17	<0.1	10	32
BH5	3	15-Jun-17	169420, ASET 57393	Brown siltly clay		No AF/FA	<0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.09	<0.5	0.4											8	< 0.4 1	19 21	24	< 0.1	8	32
BH6	0.5	15-Jun-17	169420, ASET 57393	Brown/orange clayey soil, minor gravel		No AF/FA	<0.2	<0.5	<1	<1	<1	<25	<50	<100	<100	0.4	0.5	4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	9	< 0.4 1	17 31	i 25	< 0.1	10	32
BH6	1.5	15-Jun-17	ASET 57393	Brown silty clay		No AF/FA																													
INTRA-LABOR	ATORY DUPLI	CATES																																	
BH4	3.0a	15-Jun-17	169420, ASET 57393				<0.2	<0.5	<1	<1	<1	<25	<50	<100	<100	< 0.05	<0.5	< 0.05											5	<0.4 1	13 34	↓ 17	<0.1	14	33
BH5	3.0a	15-Jun-17	169420, ASET 57393				< 0.2	< 0.5	<1	<1	<1	<25	<50	<100	<100	0.2	< 0.5	1.6											6	<0.4 1	16 22	2 25	<0.1	7	22
INTER-LABOR	ATORY DUPLI	CATES																																	
BH6	0.5b	15-Jun-17	SE166896				<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<90	<120	<0.1	<0.2	<0.8											10.0	0.4 1	5.0 20.	0 26.0	J <0.05	4.2	25.0
STATISTICAL A	NALYSIS				1																														
Min	_					-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0 1	1.0 18.0	0 17.0	0.0	4.0	12.0
IVIAX						-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0 2	3.0 35.	2 2/.0	0.0	15.0	54.0
Avg							N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.2	0.5	2.1	N/A	IN/A	N/A	N/A	N/A	IN/A	N/A	IN/A	IN/A	IN/A	0.9	N/A 1	5.1 26.	5 24.t) N/A	9.0	52.9
Staev						-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.1	N/A	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.1	N/A 5	.8 5.4	+ 3.2	N/A	3.2	11.5
* Depth relates to Depth Below Surface Level Not Tested nd = Not Detected Above Laboratory LOR						Bold = Detect	ed Above L	aboratory L	OR		RED = E	ceeds HIL Crite	eria		* Depth relates to Depth Below Surface Not Tested nd = Not Detected Above Laboratory I NL = Not Limiting Bold = Detected Above Laboratory ED = Excee											ceeds HIL	L Criteri								